



## **EASY WRAP 2000 AW - BW**

STRETCH WRAPPING MACHINE WITH TRANSPALLET ENTRY

**USE, MAINTENANCE AND SPARE PARTS HANDBOOK**

## FOREWORD

Thank you for purchasing our company's product. In order to ensure the safety and correct use of our product, please read this user manual carefully before operating it.

The user manual is applicable to the Easy Wrap 2000AW and 2000BW pallet wrapper models

The topics cover the main technical parameters of the product, safety precautions, operation methods, maintenance, and methods for dealing with some common default settings. We have done our best to ensure the completeness and accuracy of this manual during our compilation.

If you have any doubts when using the product or searching for insufficient or incorrect contents in this user manual, please contact our company or our authorized agents directly. If the user has a different understanding, he will be subject to the explanations of the technical department of our company.

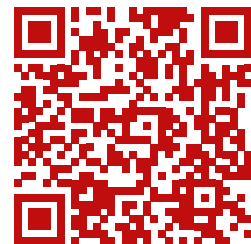
The contents such as texts, photos or tables in this user manual may change without notice.

Without the written permission of our company, the contents of this manual must not be copied or modified, otherwise it will be regarded as an act of infringement.

To verify at any time and ensure the correct use of this machine, please print and keep the user manual.

### **USE, MAINTENANCE AND SPARE PARTS MANUAL**

Before installing and using the machine, download the machine's use and maintenance manual in digital format. Point the QR Code on the side shown with the camera of your smartphone or tablet.



**DECLARATION OF CONFORMITY****IMPORTER**COMPANY: **Imballaggi Service Group S.r.l.**ADDRESS: **Via Giovanni Amendola, 46**VAT NUMBER: **IT12652741005**CITTÀ: **Roma (RM)**BUSINESS NO. **1391334****STATES THAT THE FOLLOWING MACHINE**

DESCRIPTION: STRETCH WRAPPING MACHINE

MODELS:

SERIAL NUMBER:

YEAR OF MANUFACTURE:

EXPECTED USE: SEMIAUTOMATIC MACHINE FOR STRETCH-FILM WRAPPING OF PALLET LOAD

**COMPLY WITH THE DIRECTIVE**

|                             |                                                                                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EN ISO 13850</b>         | Machinery safety - Emergency stop function - Design principles                                                                                                                                                      |
| <b>EN ISO 13732-1</b>       | Ergonomics of thermal environments - Methods for evaluating human response in contact with surfaces                                                                                                                 |
| <b>EN 61000-6-2</b>         | General standards EMC emission and immunity (electromagnetic compatibility)                                                                                                                                         |
| <b>Direttiva 2006/42/CE</b> | of the European Parliament and of the Council of 17 May 2006 relating to machinery and amending directive 95/16 / EC.                                                                                               |
| <b>Direttiva 2014/30/UE</b> | of the European Parliament and of the Council of 26 February 2014 concerning the approximation of the laws of the Member States relating to electromagnetic compatibility.                                          |
| <b>Direttiva 2014/35/UE</b> | of the European Parliament and of the Council of 26 February 2014 concerning the approximation of the laws of the Member States relating to electrical equipment intended to be used within certain voltage limits. |

**HARMONIZED STANDARDS REFERENCE:**

EN 12100-2(2010); EN 60204-1/A1: 2018; EN ISO 13849-1:2016; EN ISO 13849-2: 2013; EN 14119:2013

**AUTHORIZES TO COMPILE THE TECHNICAL FILE**

*Mr. Ventura Bernardino, c / o Imballaggi Service Group S.r.l., Via della Magliana 184, Rome (RM)*  
*Any alteration and / or modification made to this machine without Our authorization makes it automatically*  
*this certification is void.*

Place, date

Rome,

  
Ventura Bernardino (Administrator)  
The Importator



## **GENERAL RULES FOR SAFETY**

**The machine can only be used by qualified personnel.**

*Before using this machine or carrying out maintenance operations, please read the following instructions very carefully.*

### **Before use**

- Read these instructions carefully.
- Keep the manual and related technical information carefully for future reference!
- Observe the safety precautions.
- Set the technical parameters in strict accordance with the specifications given in the manual.
- Preventive and corrective maintenance of the machine must only be performed by qualified personnel.
- Allocate the reel exclusively to the use for which it was designed and built, as indicated in this manual.

### **During use**

- Do not wear loose clothing - they can get trapped in the machine.
- Do not touch moving parts while the machine is running.
- Keep your hands at an adequate distance from moving parts. If necessary, use suitable protective gloves.
- When working, use eye, face and hand protection (cut-proof gloves).
- Do not carry out maintenance work when the machine is in motion.
- Do not use water! Do not use water or steam to clean the appliance.

### **After use**

- Do not remove or cover the warning or information plates on the machine.
- Use the machine as indicated in this manual.
- Turn off the main switch of the machine by turning it to "OFF".

### **Rules for assistance and maintenance**

- Keep a record (possibly on a computer) of assistance and maintenance interventions, with relative dates.
- Before maintenance, make sure that the power supply is disconnected.
- The use of non-original spare parts cancels any warranty and civil liability provision.
- Power the winder with voltage, current and electrical frequency as required by the machine itself.
- Do not change settings or add lubricants while the machine is running.
- Do not make any modifications to the machine.

### **Accident prevention warnings**

- Pay attention to the rotation of the table.
- Pay attention to the movements of the reel holder carriage.



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## 1. > INTRODUCTION

### 1.1 > Generality



Imballaggi Service Group Srl is always available to its customers for any clarification aimed at obtaining the best performance from the machine. Photos and illustrations provided in this manual may not correspond, therefore it is specified that they are not binding.

Imballaggi Service Group Srl. Reserves the right, without prejudice to the essential characteristics described and illustrated herein, to make at any time, without committing to update this publication, changes to organs, details or supplies of accessories, which it deems necessary to technical improvement or for any other constructive or commercial need.

This manual contains the information necessary for a correct use of the banding machine.

It is necessary to strictly follow the instructions given in this manual, in order to prevent possible risk situations for both operators and the machinery itself. Uses and uses other than those stated in the following document are not allowed and can be extremely dangerous for personnel.

The company declines all responsibility for damage and accidents resulting from improper use of the machine or failure to comply with the safety, use and maintenance instructions contained in this manual and in the associated documentation.

- All the documentation deals with the topics according to the type of end user with whom you intend to communicate.
- The content of the topics of the documentation is in any case and always integrated with notes regarding safety in the various operational phases of each individual procedure.



The combination of these concepts and the various operational notions provided identifies a documentation drawn up in compliance with the requirements of the specific legislation 2006/42 / CE.

- The products sold in Europe comply with the European Directives regarding the CE mark. Directive 2006/42 / EC (Machinery Directive) concerns the supply of new machinery and other equipment, including safety components. In most cases, it is an offense to supply machinery that does not comply with the directive.

This means that they must meet the various basic safety requirements listed in Annex I of the directive, an appropriate conformity assessment must be carried out and a "Declaration of Conformity" must be provided. The previous directive 98/37 / EC came into full force on January 1, 1995 for machinery and January 1°, 1997 for safety components.



A two-year transition period was therefore granted for national laws to transpose the new directive, so that it could be respected. The manufacturer, the importer or the end user are responsible for ensuring that the equipment supplied complies with the directive. All machines are made in compliance with; "Community directive on machine safety 89/392 and subsequent updates" in force in the European Common Market. The CE mark and the relative declaration of conformity certify compliance with the applicable Community regulations. The safety of the machine is only guaranteed by compliance with the instructions contained in this manual, by the state of efficiency and by observing the safety standards provided. The rules and recommendations set out below mainly reflect what is in force, in terms of safety, and therefore are mainly based on compliance with these general rules. The machines that do not have the CE marking on the plate must be completed by the buyer who must then certify the entire system, thus providing the certification of conformity.

- To complete the documentation, topics relating to the prevention aspect are also treated in a similar way, considering the conservation and quality of the system.

## Manual and standards

Directive 2006/42 / CE implemented with Legislative Decree 17/2010 further specifies the characteristics that the manual of a CE marked machine must have. Proof of this is that the R.E.S. which in directive 98/37 / CE established the contents and methods of drafting the use and maintenance manual (RES 1.7.4, "Instructions for use"), in the new directive 2006/42 / CE it was extended and divided in further sub-paragraphs (RES 1.7.4, "Instructions" and following sub-paragraphs).

**It therefore remains mandatory to accompany each machine with a use and maintenance manual**, drawn up by the machine manufacturer or his authorized representative, which is written in the official Community language or languages of the Member State in which the machine is placed on the market and / or put into service. service.



It is recalled that, both in the case of new electrical machines or appliances and in the case of used electrical machines or appliances, in addition to the essential health and safety requirements relating to the design and construction of the same, the Directives require that the machines or the electrical appliances are accompanied by the Instruction Manual in Italian for installation, use, maintenance, transport and disposal and the Declaration of Conformity.

The documentation must be requested during the equipment purchase phase; both in the case of new and used equipment, the use must be preceded by a training phase for the employees on the basis of the information contained in the User Manual itself. It represents an obligation on the part of the employer.

## 1.2 > Symbology for the representation of texts

All the parts of the documentation are divided by SECTIONS, each section can in turn be divided by TOPICS, and finally each topic can be divided into SUB-TOPICS. The representation of these TITLE LEVELS is shown below:

# 1. > SECTION TITLE

## 1.1 > Subject title

### 1.1.1 > Subtopic title

## Obligation to carry out cleaning



Mandatory cleaning to maintain the production quality of the machine, through the use of vacuum cleaners, or rags soaked in mild detergent solutions. It imposes the absolute prohibition of the use of compressed air puffs, or the use of chemical solvents, gasoline, etc.

## Obligation to carry out lubrication

Mandatory lubrication procedures, to maintain the production quality of the machine, through the use of brushes, greasers, oilers, etc.

## Risk of invalidation of the CE Certificate of Conformity

Notes, notions or procedures that if not respected or carried out cause the decay of the "EC Declaration of Conformity" issued by Service Group Srl. Therefore, failure to observe the content of these descriptions relieves Service Group Srl of any responsibility by imposing the obligation on the Customer to recertify the machine.

## Warnings and definitions

Each interaction between machine and operator was evaluated with reference to the entire life span of the equipment itself. The result of these assessments translated into appropriate measures. In this sense, both the number of operators and the related qualifications required and the intervention procedures on the equipment are designed to ensure the safety and health of the employees. The staff in charge of using the machine used on the production line can be considered divided into two categories:

- **Machine operator:** is the person responsible for the normal running of the machine. It is not required any particular technical knowledge and for its training a short period of apprenticeship accompanied by the reading and implementation of the instructions for the assembly of the machine is sufficient.
- **Machine maintenance technician:** the person in charge of carrying out special operations even in the absence of accident prevention protections. Training takes place exclusively by the personnel involved in the work and a fair basic knowledge of both mechanics and electronics is required, in addition to the reading and implementation of the instructions for assembling the machine.

The operators can in turn be divided according to the different tasks and skills into:

**Driver / Operator:**

It is that person qualified and authorized by the purchaser who receives the task of operating the machine with active protections through the use of the controls that are arranged on the operator panel.

**Mechanical maintenance technician:**

It is that qualified technician authorized by the purchaser who is able to install, repair, perform ordinary or extraordinary maintenance and any set-up operations of an exclusively mechanical nature on the machine.

**Electrical maintenance engineer:**

It is that qualified technician authorized by the purchaser who is able to install, repair, perform ordinary or extraordinary maintenance and any purely electrical set-up operations (if necessary / foreseen) on the machine.

**Warnings for the machine operator.**

The machine must be used by qualified and adequately trained personnel.

The use of the machine, according to the regulations and laws in force, must always remain within the "limits of permitted use".

**1.3 > Signage**

There are safety warnings and acronyms on the machine, the purpose of which is to alert operators to the existence of a danger. The safety of workers must always be considered first in a plant / machine / equipment.

In an industrial environment there are many dangers: mechanical moving parts, electrical energy, pneumatic energy, hydraulic energy, hot surfaces, noise and the workers must be properly protected from these dangers but also educated and informed.

It is important to emphasize that while actively intervening on the machine with safety barriers, protections or mechanical devices, in order to reduce the dangers of the same, there are always residual risks.

**Safety signs and emergency communications**

The safety signs include all those informative pictograms for the protection and safeguarding of people. Signs are of fundamental importance in warning of the presence of potential risks, in prohibiting behaviors that could give rise to dangerous situations, in prescribing useful actions for the purpose of safety and prevention and in providing indications for first aid interventions.



The employer is required to identify the dangers, assess the risks and take action in order to minimize them, also using adequate safety signs which must be clearly visible, checked frequently and, if necessary, replaced with a new one.

## 2. > GENERAL INFORMATION AND SPECIFICATIONS OF THE MACHINE

### 2.1 > Introduction

The Easy Wrap 2000 W pallet wrapper is a well-structured, reliable and easy-to-use machine. The machine consists of a rotating plate on which to place the pallet to be wrapped, designed for loading the product by means of a transpallet. The wrapper is managed by a PLC and a color touch screen interface placed on the column of the pallet wrapper. It is possible to set different parameters and winding methods according to work needs, thanks to the storage of 10 programs.

The complete automation of the machine is guaranteed, during operation in automatic mode, by a PLC that supervises the management of the data detected by the sensors, sequentially activating the actuators of the individual activities. The machine can be interfaced with other machines used for feeding or unloading.

The installation of the machine is the responsibility of the customer, who must interface. However, during the processing of the line, the presence of a Qualified Person is required to check the status of the machine. The machine does not have work settings other than those specified in the manual. The moving parts, which are part of the machine, are equipped with protection devices equipped with safety microswitches.

Imballaggi Service Group Srl provides complete instructions for the maintenance of the equipment. These instructions are provided in a manual that isolates and defines each separate area of equipment that requires maintenance and provides specific instructions on the frequency of maintenance, materials, parts and special techniques or tools that may be required. The machine can operate three shifts a day, 7 days a week, for a total of 24 hours.



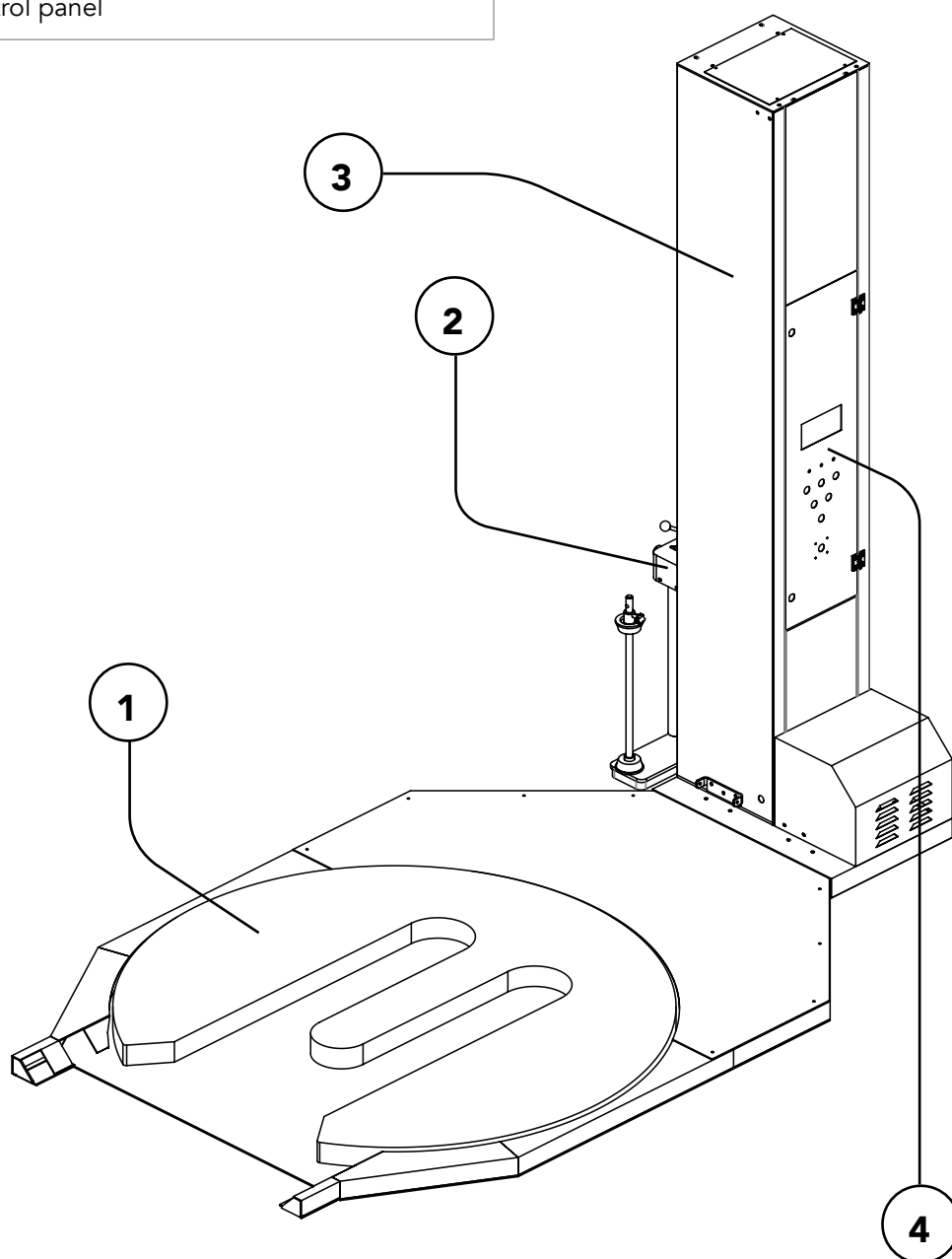
#### ATTENTION

The operator who is not careful or not at all may run the risk of trapping the upper limbs with the moving parts. The operator himself is the first to have the utmost attention and responsibility during work operations.



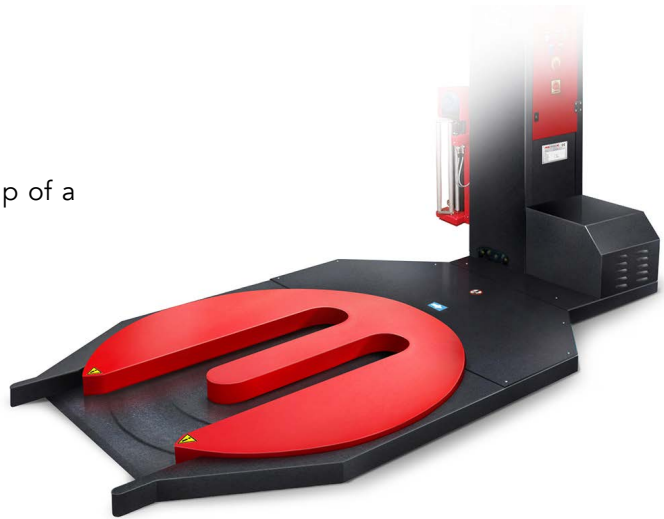
## 2.2 > Main parts of the machine

|   |                                     |
|---|-------------------------------------|
| 1 | Rotary table with transpallet entry |
| 2 | Vertical reel holder carriage       |
| 3 | Column                              |
| 4 | Control panel                       |



## 2.3 > Processing steps

1. Transport the pallet (load of its goods) with the help of a transpallet, on the rotary table.



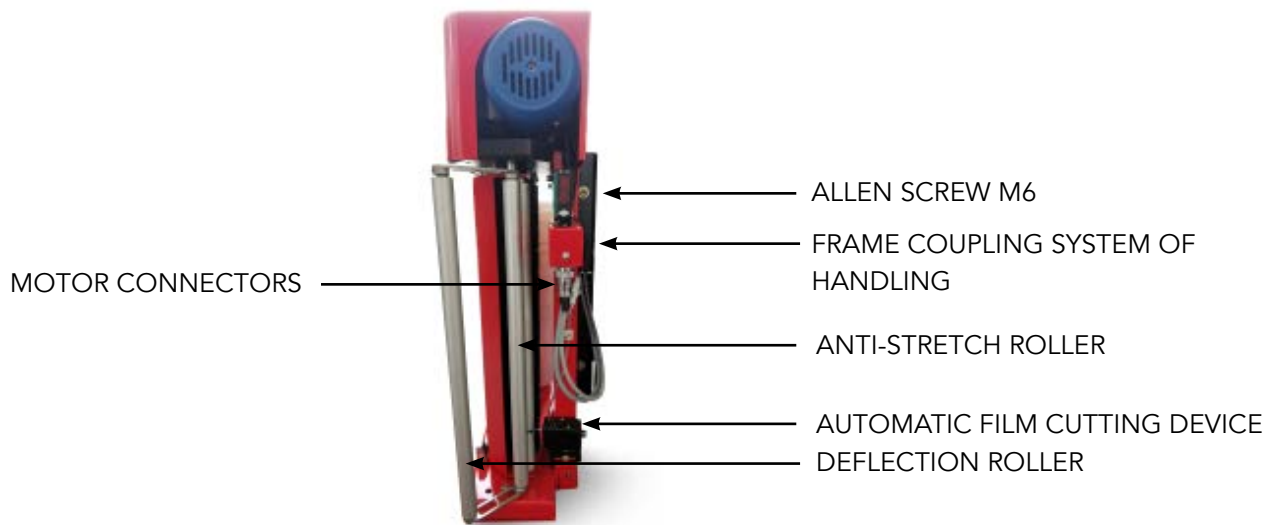
2. Hook the film to the base of the pallet.  
3. Start the machine which starts wrapping automatically the pallet stopping when the work is completed.



4. Before removing the pallet, cut the joining film between the reel-holder carriage and the pallet. (If the automatic film cutting system is set up, this operation takes place automatically).



## 2.4 > Details of the pre-stretch carriage (only on Easy Wrap 2000 BW model)



### 2.4.1 > Motorized pre-stretch carriage installation

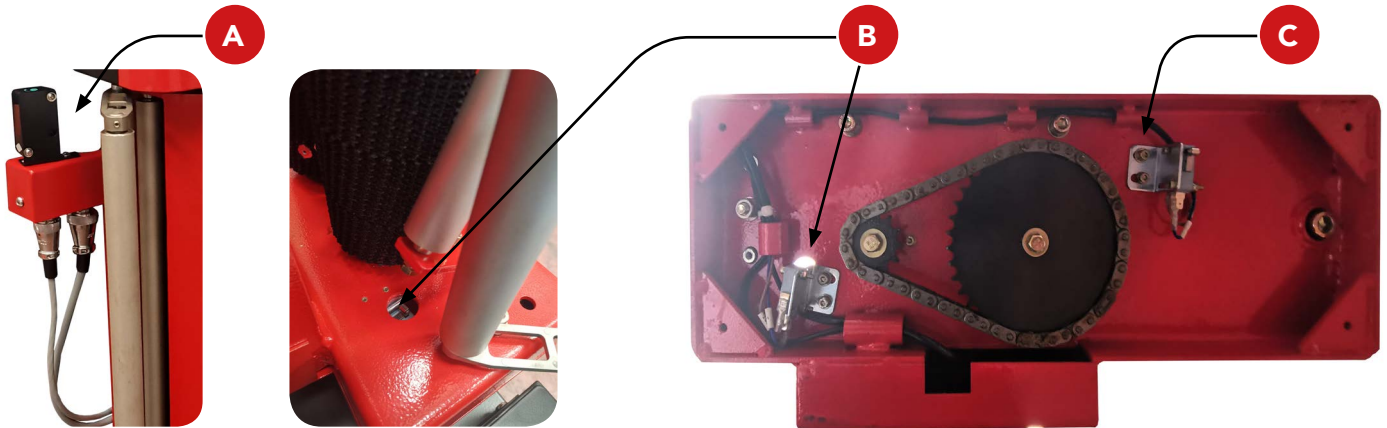
If you have purchased the Easy Wrap 2000 BW model, proceed according to the following instructions.

1. Lift the trolley and place it in the appropriate couplings on the handling frame located on the rewinder column (Fig 3.14);
2. Use the 4 M6 screws to fix the trolley to the handling frame (FIG. 3.15);
3. Tighten the 4 M6 screws, (Fig 3.15);
4. Secure the 2 power connectors (12 and 4 pin) on the pre-stretch carriage in the correct socket, as shown in
5. Fig. 3.16 - 3.17 - 3.18



## 2.5 > Pre-stretch carriage sensors and photocells

The pre-stretch trolley installed on the winder contains sensors and photocells that are important to be aware of in the event of a machine fault. **(A)** Photocell for recognizing the product to be wrapped; **(B)** proximity sensor for detecting pre-stretch door opening / closing; **(C)** proximity sensor for pre-stretch carriage anti-crushing detection.



## 2.6 > Inserting the film reel

1. Unscrew the upper stop for inserting the coil (Fig. 3.20)
2. Then gently insert the reel with the direction of the film as shown in Fig.3.21
3. shown in Fig.3.21
4. Reinsert the upper stop to stop the film reel (Fig.3.22 - 3.23)
5. Make sure that the inner hole of the coil is inserted correctly
6. in the two clamping ends (Fig. 3.19).

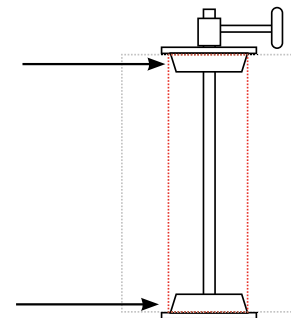


FIG. 3.19



FIG. 3.20



FIG. 3.21



FIG. 3.22



FIG. 3.23

## 2.7 > Passage of the inner film of the carriage with pre-stretch

1. Open the door of the trolley by the appropriate lever (Fig. 3.24 - FIG 3.25)
2. Gently pull the film from the reel and pass it as shown in FIG 3.26
3. Close the trolley door and place the film on the object to be wrapped. (Fig 3.27)
4. Take the end of the film and pull it until it reaches the top of the board to be wrapped (Fig. 3.28).
5. Method of insertion towards the reel and passage of film with internal adhesive surface. (FIG.3.29)



FIG. 3.24



FIG. 3.25



FIG. 3.26



FIG. 3.27



FIG. 3.28

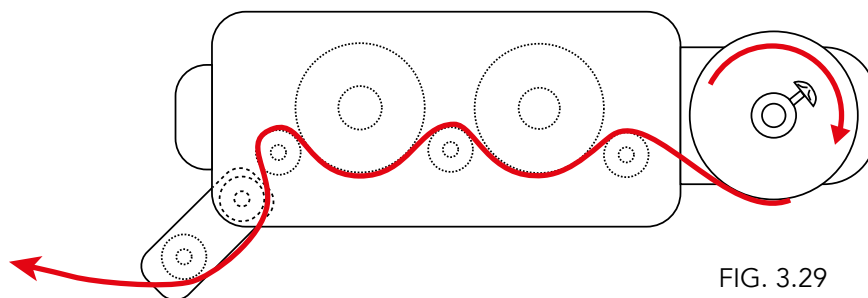


FIG. 3.29

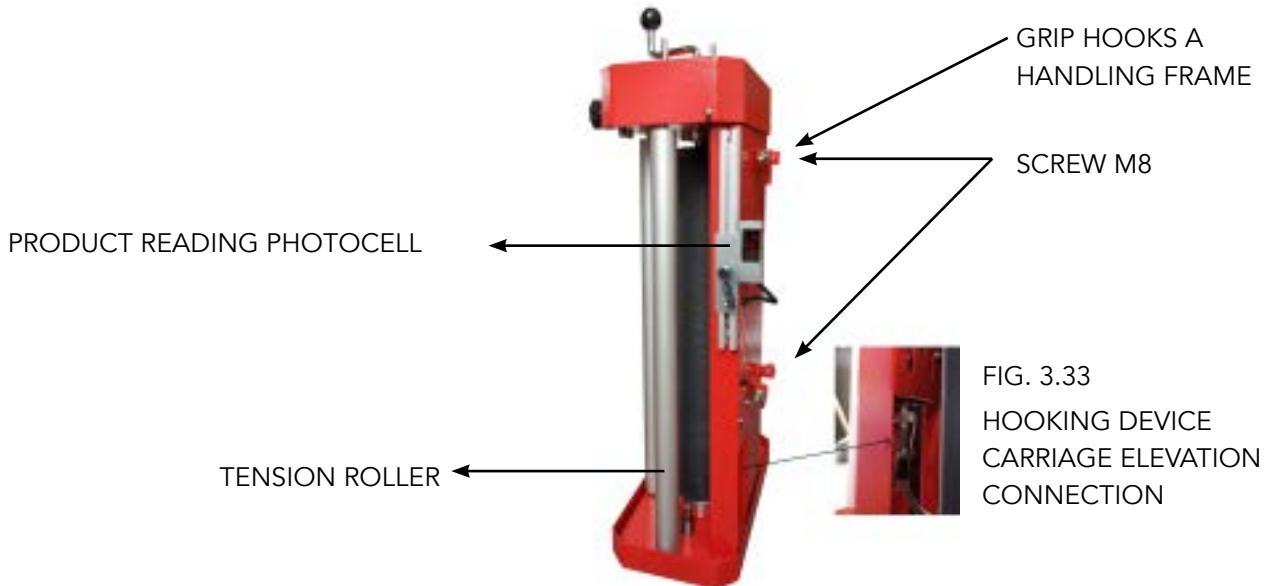


### DIRECTION OF TABLE ROTATION AND FILM TENSIONING

Correct installation of the reel is important to obtain a perfect adherence of the film to the packaging. The rotation of the rotary table turns clockwise, therefore it is important to check that the adhesion part of the film is in contact with the product to be wrapped.



## 2.8 > Details of the mechanically tensioned carriage (only on Easy Wrap 2000AW model)



## 2.9 > Carriage installation with manual film tensioning

For **Easy Wrap 2000 AW** model, proceed according to the following instructions.

1. Lift the carriage and place it in the appropriate hooks arranged on the handling frame of the pallet wrapper column (Fig 3.29);
2. Use 4 M6 Allen screws to fix the trolley to the handling frame and tighten them (Fig 3.30);
3. Secure the elevation attachment in the socket, as shown in Fig. 3.31 - 3.32 - 3.33



FIG. 3.29



FIG. 3.30



FIG. 3.31



FIG. 3.32

## 2.10 > Film reel loading system (only on Easy Wrap 2000AW model)

1. Gently insert the coil into the rod as shown in Fig. 3.34
2. Respect the direction of insertion of the film as shown in Fig.3.35
3. Pass the film through the rollers of the carriage Fig.3.36 (Forward to roller **A** - behind roller **B** - forward to roller **C** and **D**)

ASTA PORTABOBINA



FIG. 3.34



FIG. 3.35



FIG. 3.36

## 2.11 > Film passage system

Once the film reel has been inserted, proceed as follows:

1. Place the film clutch lever in position "B" to loosen the clutch
2. According to the type of reel purchased, perform the film steps as described in Fig.3.37
3. Once the film has passed between the rollers, pull it out and let it out for about 1 meter.
4. Reposition the clutch lever in position "A" to tighten the clutch
5. Depending on the type of film tensioning desired, turn the tensioning knob clockwise or counterclockwise. Turning the knob will indicate the degree of tension of the film ranging from a value of 0 to 4.

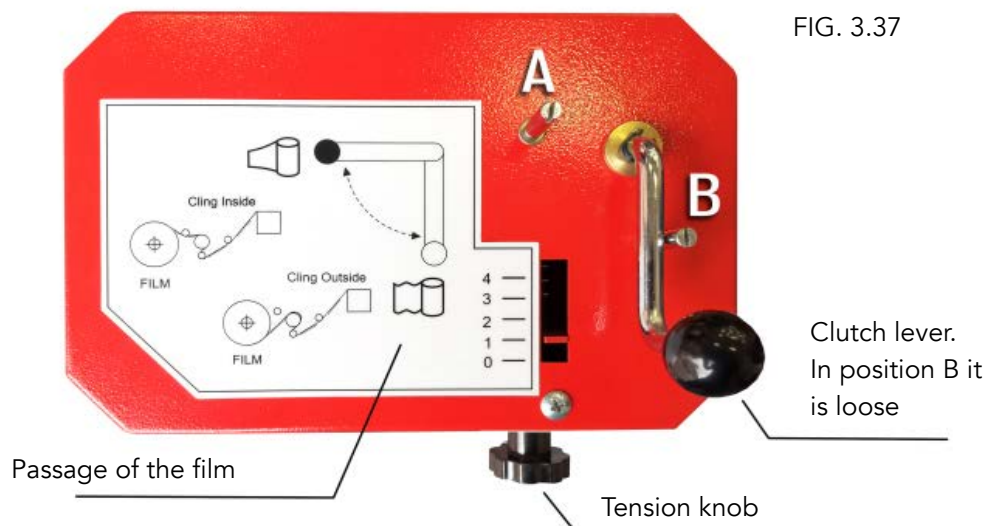


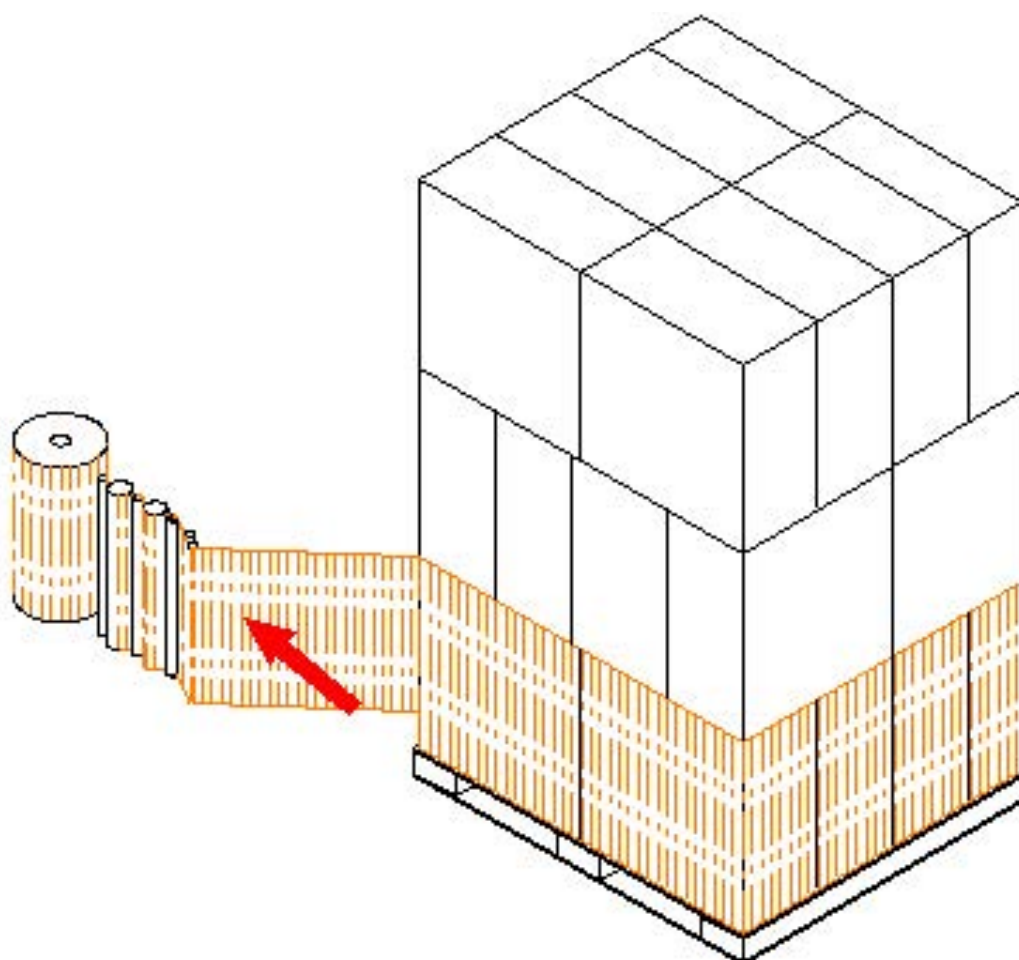
FIG. 3.37

**ATTENTION**

Pay the utmost attention when inserting the stretch film. If it is mounted in the wrong direction, a perfect adhesion to the packaging to be wrapped will not be obtained.

Cling Inside = internal adhesive (See film passage method in Fig.3.37)

Cling outside = external adhesive (See film passage method in Fig.3.37)





## 2.12 > Starting the machine using the control panel

1. La posizione di lavoro dell'operatore è indicata in Fig. 3.38
2. Ruotare in senso orario l'interruttore principale su "ON" (Fig. 3.39 - POS.8);
3. Nel caso in cui la macchina vada in emergenza, accertarsi che il tasto di emergenza non sia attivato (Fig. 3.39 POS 7). In tal caso ruotarlo in senso orario per disattivarlo.
4. Dopo l'accensione premere il tasto Power per attivare la macchina (Fig. 3.39 - POS. 2) e successivamente il pulsante di Reset per alcuni secondi (Fig. 3.39 - Pos. 5) per effettuare il reset della macchina e renderla operativa.

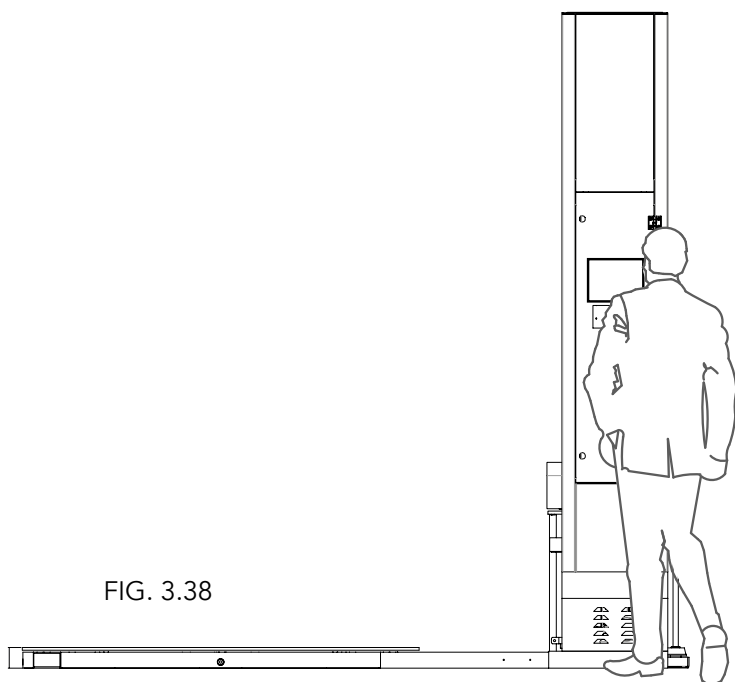


FIG. 3.38



FIG. 3.39

| N° | FUNCTION OF THE BUTTONS ON THE CONTROL PANEL |
|----|----------------------------------------------|
| 1  | 7.2 "color touch screen monitor              |
| 2  | POWER button                                 |
| 3  | Light and sound signal for alarms (Buzzer)   |
| 4  | Work cycle START button                      |
| 5  | RESET button                                 |
| 6  | STOP button                                  |
| 7  | Emergency button                             |
| 8  | Main power switch                            |

## 2.13 ▶ Using the machine in manual mode

To use the pallet wrapper in manual mode, press the icon  on the touch screen interface to access the management menu. Fig.3.41 refers to the Easy Wrap 2000AW model while Fig.3.42 refers to the Easy Wrap 2000BW model



FIG. 3.41



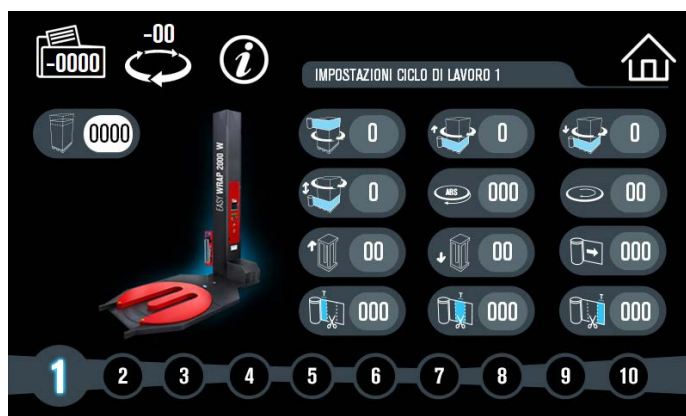
FIG. 3.42

In the screens shown below, it is possible to manage the trolley elevation by pressing the icon  , the trolley lowering by pressing the icon  and the table rotation using the icon  . To stop the table in rotation, press the STOP button on the touch display or the stop button (FIG. 3.42 POS. 6) on the control panel. To return to the main menu, press the icon 



## 2.14 ▶ Automatic work cycle

Access the parameter setting screen via the icon  from the display home. Adjust the number of the desired high and low turns of the film, by entering the parameter next to the icon  and  . Go back to the main screen using the icon  and start the machine with the PLAY button. First check that the objects placed on the pallet have been stacked correctly. Make sure that the weight and height of the objects do not exceed the values allowed by the machine.



## 2.15 > Work phases with automatic cycle mode

- After positioning the pallet on the rotary table, upon pressing the start button on the display or control panel, the winder will start the processing cycle.
- The machine will start rotating the table clockwise. After a rotation cycle, the film carriage will begin to lift until the photocell detects the presence of the products to be wrapped.
- The machine will wrap the top of the pallet according to the preset parameters (a high number of revolutions). The film trolley will then begin to descend.
- Once the low position of the trolley has been reached, the base of the pallet will be wrapped according to the set parameters, (number of revolutions at the bottom) after which the deceleration and stopping of the rotary table will take place. In the Easy Wrap 2000 BW model, the final phase will also include cutting the film before stopping the rotary table in position.
- The wrapped pallet must be removed for the insertion of the next one.

## 2.16 > Machine automation

### The automation of the machine is guaranteed by a PLC.

All I / O descriptions used in the schematics, PLC program, and physical tag are unique. All devices such as sensors, solenoid valves, switches and indicators are equipped with identification plates.

All connecting wires are marked with printed labels placed on both ends. The number on the label corresponds to the number shown on the wiring diagram.

The machine is equipped with a panel that provides the system user interface.  
The user interface allows the operator to set the working parameters.



## 2.17 > Control panel



For control panel functions, refer to Fig.3.13

|   |                  |
|---|------------------|
| 1 | Touch screen     |
| 2 | Power indicator  |
| 3 | Buzzer           |
| 4 | Start button     |
| 5 | Reset button     |
| 6 | Stop button      |
| 7 | Emergency / Stop |
| 8 | Power switch     |



### IMPORTANT!

The layout of the buttons shown in the figure. 3.13 may be located differently on the real machine.

| # | COMMAND                     | USE                                                                                                                                                                                                                                                                                                                                                                                  |
|---|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | TOUCH SCREEN                | It must be used to view and manage the progress of the machine and production.                                                                                                                                                                                                                                                                                                       |
| 2 | BUTTON / LIGHT POWER SUPPLY | The power light on indicates that the power supply is connected.                                                                                                                                                                                                                                                                                                                     |
| 3 | BUZZER                      | Sound signaling of machine movement                                                                                                                                                                                                                                                                                                                                                  |
| 4 | START BUTTON                | Press the start button, the machine starts the set work cycle.                                                                                                                                                                                                                                                                                                                       |
| 5 | RESET BUTTON                | Press the reset button for about 3 seconds to bring the machine to the initial position and to reset the errors.                                                                                                                                                                                                                                                                     |
| 6 | STOP BUTTON                 | Press the stop button, the machine stops the work cycle                                                                                                                                                                                                                                                                                                                              |
| 7 | EMERGENCY STOP BUTTON       | After pressing the emergency stop button, the light of the luminous safety button will also turn off. Whatever stage it is in, the machine will immediately stop its functions. Following the direction indicated by the arrow, turn the red knob, press the luminous emergency reset button, then the reset button for about 3 seconds, the machine will return to normal operation |
| 8 | GENERAL SWITCH              | It must be used to power the machine electrically or to shut down the machine.                                                                                                                                                                                                                                                                                                       |

### 2.17.1 > HMI operator panel

The machine is equipped with a main display for managing the TG765S-MT model system (1) from which it is possible to manage the operation of the machine.

The display has been designed with IP65 degree of protection and is ideal for simple viewing tasks, even in harsh environments. Additional benefits include integrated software functions such as a reporting system, recipe management or graphics functions.

Intuitive operation via touch and tactile function.

Equipped with all the necessary basic functions such as alarm recording, recipe management, textures, vector graphics and language switching.



## 2.18 > Technical data of the winder

| ITEM                         | PARAMETERS                                                                                                                 |                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|                              | Stretch film wrapping machine with rotating table Easy Wrap 2000 AW (mechanical tensioning)                                | Wrapping machine with stretch film with rotating table Easy Wrap 2000 BW (motorized pre-stretch) |
| Power supply                 | 220/110V, 1PH, 50/60Hz                                                                                                     |                                                                                                  |
| Power                        | 1 kW                                                                                                                       | 1,25 kW                                                                                          |
| Film tensioning              | Film tension adjustment by mechanical brake                                                                                | Film tension adjustment via touch screen panel                                                   |
| Turntable speed              | 0÷10 giri/min                                                                                                              |                                                                                                  |
| Diameter of turntable        | 1500 mm (optional 1650 mm)                                                                                                 |                                                                                                  |
| Height of upright stanchion  | 2400 mm (optional: 2700, 3000, 3200, 3400, 3600) mm                                                                        |                                                                                                  |
| Pallet truck entry           | Standard front (optional right or left entry)                                                                              |                                                                                                  |
| Wrapping material            | LLDPE stretch film, width ≤ 500mm, external diameter ≤ Ø 280mm                                                             |                                                                                                  |
| Object or goods to be packed | Useful height of the product to be packed - 2200 mm                                                                        |                                                                                                  |
|                              | Maximum weight of the pallet supported by the rotating table 1200 Kg. (diameter 1500 standard - 2000 Kg for diameter 1650) |                                                                                                  |
|                              | Maximum product dimensions per table of Ø 1650 - L 1000 x W 1200 mm                                                        |                                                                                                  |
| Machine weight               | 650 kg                                                                                                                     |                                                                                                  |
| Noisiness                    | ≤75dB(A)                                                                                                                   |                                                                                                  |
| Environmental conditions     | Relative humidity ≤ 90%, temperature -10°C - 40°C                                                                          |                                                                                                  |
| Lubricating grease           | General-purpose grease No. 0                                                                                               |                                                                                                  |

## 2.19 > Caratteristiche del film utilizzato

| FEATURES                       | PARAMETERS            |
|--------------------------------|-----------------------|
| External diameter of film reel | 280 mm (Fig. 1.1 - B) |
| Height of film reel            | 500 mm (Fig. 1.1 - C) |
| Thickness of film              | 12 - 35 my            |
| Internal diameter of film reel | 76 mm (Fig. 1.1 - A)  |
| Weight of film reel            | 16 Kg.                |

The machine can use various types of film reels, with the following dimensions (Fig. 1-1):

**The main types of films that can be used are:**

- A. Single-sided stretch film (1 in Fig. 1-2)
- B. Double-sided stretch film (2 in Fig. 1-2)

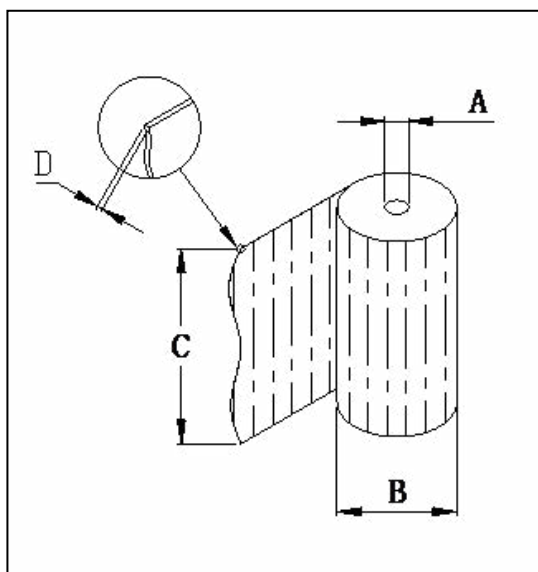


Fig 1.1

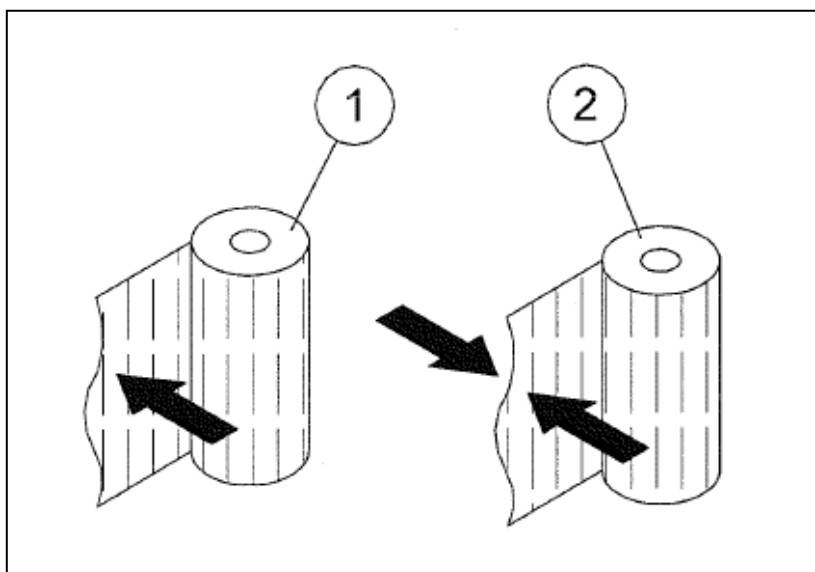


Fig 1.2



## 2.20 > CE plate

The machine distributed by us is equipped with a CE identification plate on which the data of the distributing company are shown with the related data of the item sold. (FIG 1.2).

The plate complies with the Community Directives in force and is presented as shown in the following figure:

FIG. 1.2

|                                                                                                  |  |                                                                                                                                           |                          |
|--------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>ISG&gt;PACK</b><br>AUTOMATIC PACKAGING SYSTEM                                                 |  | <b>CE</b>                                                                                                                                 |                          |
| Imballaggi Service Group S.r.l.<br>Sede Legale:<br>Via della Magliana 184<br>00146 Roma - Italia |  | Sede Operativa:<br>Via dei Castelli Romani Km.11,700<br>00071 Pomezia (Rm) - Italia<br>Phone: +39 06 91607561 - info@imballagiservice.com |                          |
| MODELLO<br>MODEL                                                                                 |  |                                                                                                                                           |                          |
| MATRICOLO<br>SERIAL NUMBER                                                                       |  |                                                                                                                                           |                          |
| CONSUMO ARIA<br>AIR CONSUPTION                                                                   |  | lit/min                                                                                                                                   | ANNO<br>YEAR             |
| PRESSIONE MASSIMA<br>MAX PRESSURE                                                                |  | BAR                                                                                                                                       | PESO<br>WEIGHT           |
| POTENZA TOTALE<br>TOTAL POWER                                                                    |  | KW                                                                                                                                        | ASSORBIMENTO<br>AMPERAGE |
| ALIMENTAZIONE<br>POWER SUPPLY                                                                    |  | V                                                                                                                                         | PH                       |
|                                                                                                  |  |                                                                                                                                           | Hz                       |

### The CE plate shows:

- Name of the manufacturer;
- Machine model;
- Serial number;
- Air consumption (if present);
- Maximum pressure (if present);
- Total power (kW)
- Year of manufacture;
- Machine weight;
- Electric absorption;
- Supply voltage.



### NOTE

If the user wants to contact the manufacturer, please provide the model number and the serial number of the machine.

## 2.21 > Recommendations for the good operation of the machine

For the correct operation of the SEMIAUTOMATIC PALLET WRAPPING machine, it is necessary that:

- During normal operation, the machine is placed in a covered and dry place;
- The ambient temperature is between 0 ° C and 45 ° C;
- the relative humidity is less than 90% (without condensation);
- The place where the machine is placed does not have corrosive vapors or excessive heat sources.

Carefully check the efficiency of the safety devices and emergencies, performing accurate operational tests of all of them.

### 3. ➤ TRANSPORT AND INSTALLATION

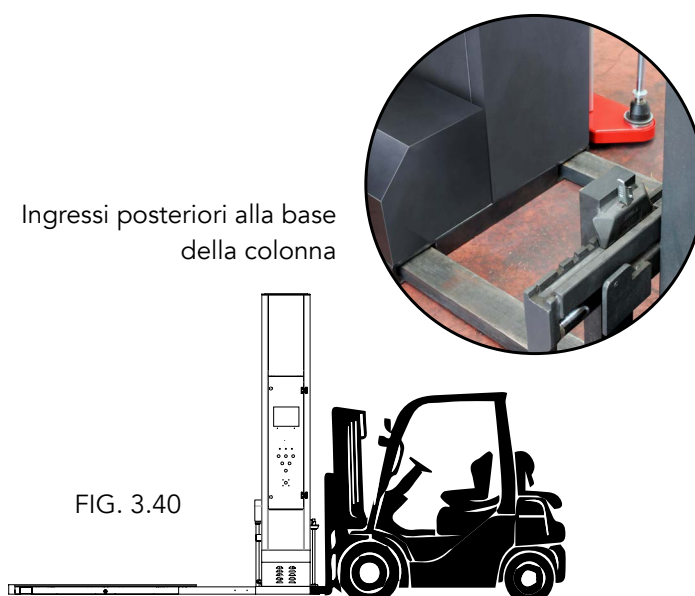
This paragraph provides the general guidelines to be followed for the handling, packaging and transport of the machines. During each operation it is necessary to respect what is described below, bearing in mind that the weights of the machines necessarily require the use of suitable lifting and handling means (hoists, forklifts, ropes, belts, etc.) and that it is necessary to comply with all safety regulations for moving suspended loads.

Please note the use of suitable equipment that meets the requirements as well as properly checked (Legislative Decree 81/2008 Annex VII). The manufacturer declines all responsibility deriving from improper or unsuitable use of the equipment used for handling and transporting the machinery.



#### 3.10 ➤ Transporting or moving the machine

The Easy Wrap 2000 AW and BW model, having an open table system for transpallet entry, does not allow it to be frontally forked by a forklift to be moved. To be transported by a forklift, the machine can only be forked in the rear part of the column, by inserting the two forks in the relative slots of the pallet wrapper (as in Fig. 3.40).



### 3.2 > Packing

The transport of each machine must be carried out using special packaging (wooden crates, pallets with protective cage, etc.), in order to protect the machine from shocks and the action of atmospheric agents (rain, humidity, etc.). It is advisable to transport the machine properly disassembled, arranging all the parts on the pallet of the cage.



#### ATTENTION

For the various phases relating to the loading, unloading and handling of the machine and its complementary elements and accessories, it is recommended to use qualified personnel specialized in the use of forklifts suitably assisted by a person on the ground able to provide the operator with the necessary indications and reports.

Refer to Fig. 3.1 to see the appearance of the machine in its eventual packaging. The machine can be packed in a wooden or steel crate or on a platform. After removing the packaging Fig. 3.2 check the following:

- No pieces have fallen into the packaging;
- That the model of the machine is the right one;
- The user and maintenance manual is present with a declaration of conformity (Fig 3.2, pos. 1);
- There are no transport damage.

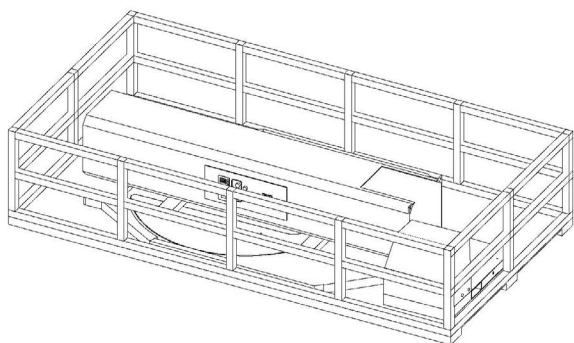


FIG. 3.1  
During transportation

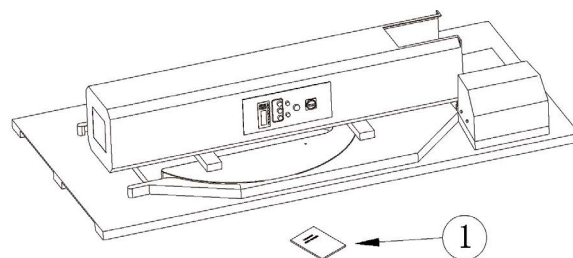


FIG. 3.2  
After removing the packaging

#### PRESCRIPTION

The intervention of qualified personnel is strongly recommended. Current legislation obligatory staff training in the use of forklifts.



#### ATTENTION

For the various phases relating to the loading, unloading and handling of the machine and its complementary elements and accessories, it is recommended to always use and wear suitable protections, such as gloves, safety shoes, protective helmets, etc.

### 3.3 > Unpacking

**WARNING:** it is advisable to remove the machine from its packaging only at the time of installation, so as to minimize the risk of damage to the machine during storage.

The unpacking operation can be carried out in conjunction with the positioning, so as to minimize lifting and transport operations. Obviously, before positioning the machine, it is necessary to check that all the predispositions of the site (fastenings, energy connections, etc.) have been prepared correctly.

#### To remove the machine from its packaging:

- Transport the still packaged machine as close as possible to the mounting position;
- Open the wooden crate (if present);
- Remove the fixing systems of the machine to the pallet;
- Check the contents of the packaging and make sure that it corresponds with what is declared by the manufacturer on the relevant transport document;
- Lift the machine from the pallet, using a suitable lifter, cables or ropes suitable for the weight of the machine itself (specified in the plate data) and what is necessary for safe handling;
- Position the machine in the exact point where it is to be installed;
- Dispose of the packaging parts.



#### ATTENTION

Pay the utmost attention to lifting and handling operations! Danger for suspended loads.

#### PRESCRIPTION

The intervention of qualified personnel is strongly recommended. Obligatory staff training in the use of forklifts.

### 3.4 > Accessories

After carrying out the check mentioned in the previous paragraph, check the presence of the accessories shown in the delivery notes.

**Any discrepancies must be reported immediately.**



### 3.5 > General information on installation

The ducts of the various systems provided for the operation of the machine to which this manual refers (electrical) must be adequate to withstand the maximum absorption of the machine.

Some electrical connections between the various parts and components of the machine are of the quick-coupling type in order to facilitate assembly at the customer's premises.



#### ATTENTION

The execution of the plant must be carried out by specialized personnel strictly following the sizing data indicated in the machine documentation.

#### PRESCRIPTION

The intervention of qualified PES personnel (CEI 11-27) is strongly recommended. Upon request, the manufacturer is able to organize specific courses with the attribution of the PES qualification and suitability for live electrical work.



#### ATTENTION

Do not modify the machine and its components without first consulting the person in charge of the machine subject of this use and maintenance manual who, otherwise, will reject any liability arising from the modification.

### 3.6 > Positioning and cleaning

After opening the packaging as expected, the various parts that make up the machine must be handled.

- Handling will be carried out with a forklift or crane;
- Use a forklift truck for the machine components. Fork the components at the base, placing the forks in the holes provided at the base of the rewinder column. If a crane is used, mount the eyebolts on the machine to which the special "U" shackles carrying the lifting straps will be hooked.
- All the tools necessary for handling are NOT supplied with the machine.



#### ATTENTION

Make sure that all lifting means to be used have an adequate capacity of min. "P" higher than the weight of the machine.

Before positioning the machine, it is necessary to check the conditions of the floor.

The conditions of the floor must be such as to guarantee sufficient solidity to support the weight of the machine and any accessories. The support structure must not deform, compromising the strength and safety of the machine itself and of the user.

### 3.7 > Procedures for installing the pallet wrapper

To install the riser, proceed as follows:

1. Use a crane or forklift (Fig 3.9 - 3.10) to transport the machine without its packaging to the installation site.
2. If you are using a forklift (Fig. 3.10) make sure to correctly insert the forks into the appropriate entries in the rear part of the pallet wrapping base (Fig. 3.10A).
3. Disassemble the engine casing by removing the 4 Allen screws.
4. Attach a rope to the M10 eye bolt in the upper part of the column (Fig. 3.11) and slowly lift until reaching the position of 90 ° with respect to the surface (Fig. 3.12).
5. Insert the 4 screws supplied to fix the column to the base (see Fig.3.12A)
6. Connect the electrical connectors
7. Reinsert the engine casing and secure it with the 4 Allen screws.

FIG. 3.9

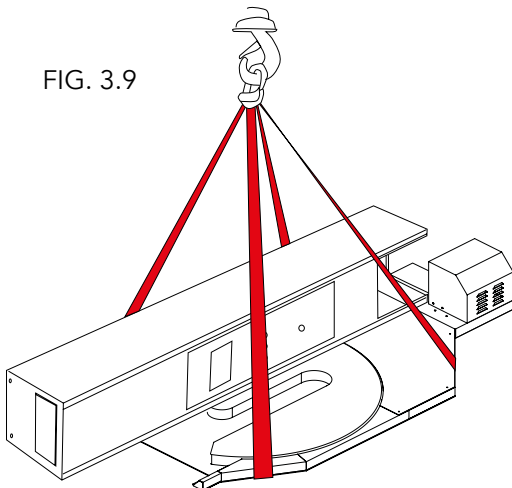


FIG. 3.10A

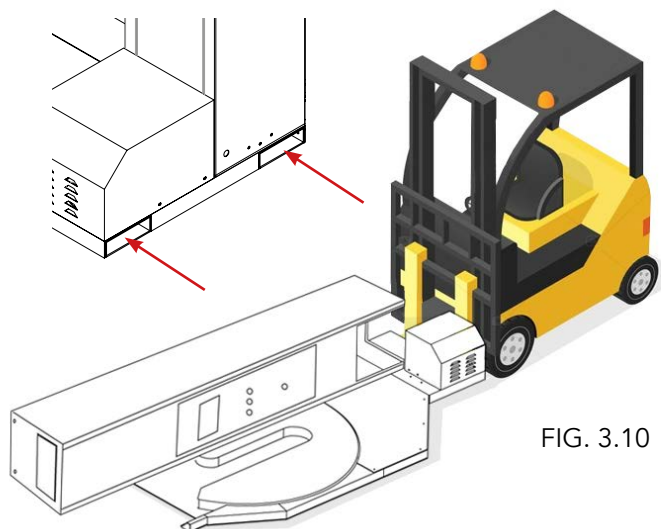


FIG. 3.10

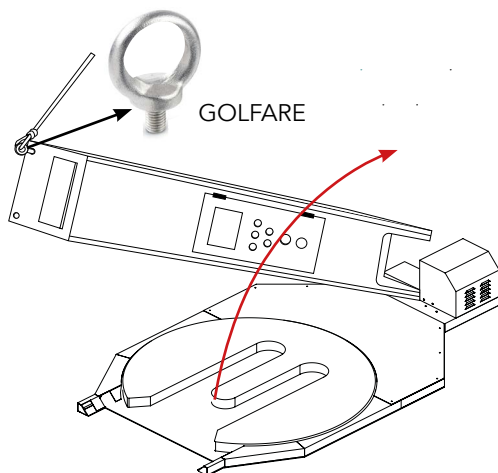


FIG. 3.11

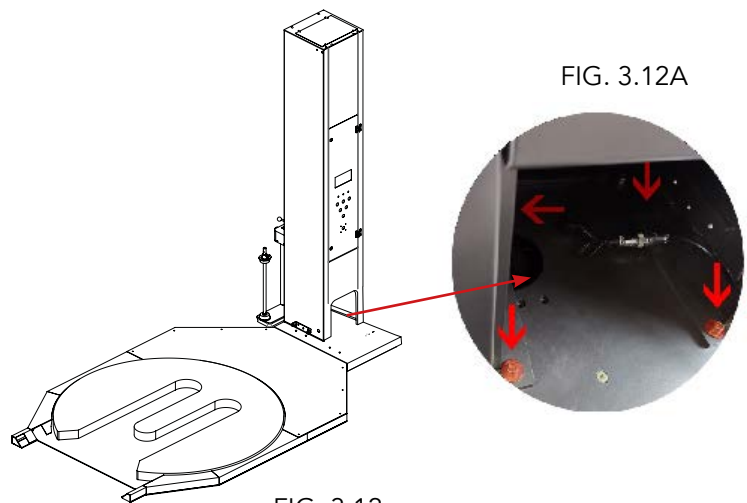
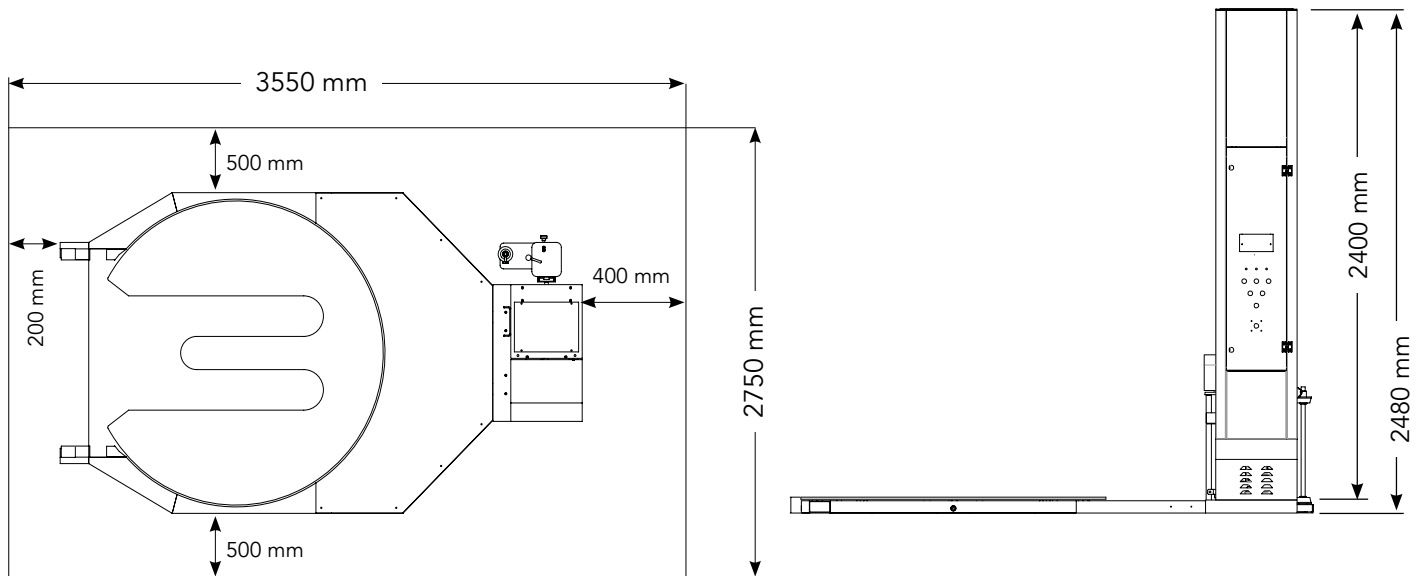


FIG. 3.12

### 3.8 > Space required for machine installation



### 3.9 > Safety to be respected when using the machine

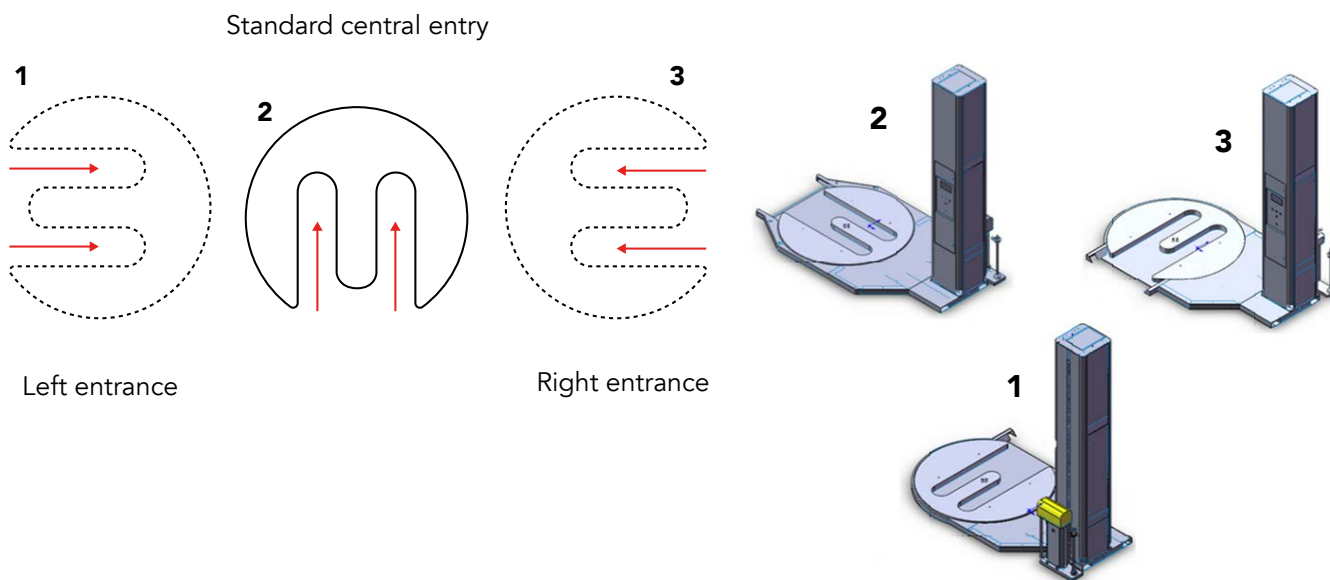
#### 3.9.1 > Precautions on using the machine

1. Check that the power supply is suitable for the machine. Do not insert the plug into the socket if the power supply voltage is incorrect. This machine adopts 220V single-phase system and dual color grounding cables to prevent current leakage.
2. Do not rest your feet on the rotary table while the rewinder is in motion.
3. Do not install the machine on a soft surface.
4. Place the pallet to be wrapped in the center of the rotary table.
5. Once the work is finished, turn off the main switch.
6. In an emergency, press the emergency button to stop the machine immediately.
7. Clean the machine daily after its use.
8. Do not remove electrical equipment randomly: not only the operation of the winder is compromised, but also the safety for the operator.
9. The inspection and maintenance of electrical equipment is permitted only to qualified personnel.

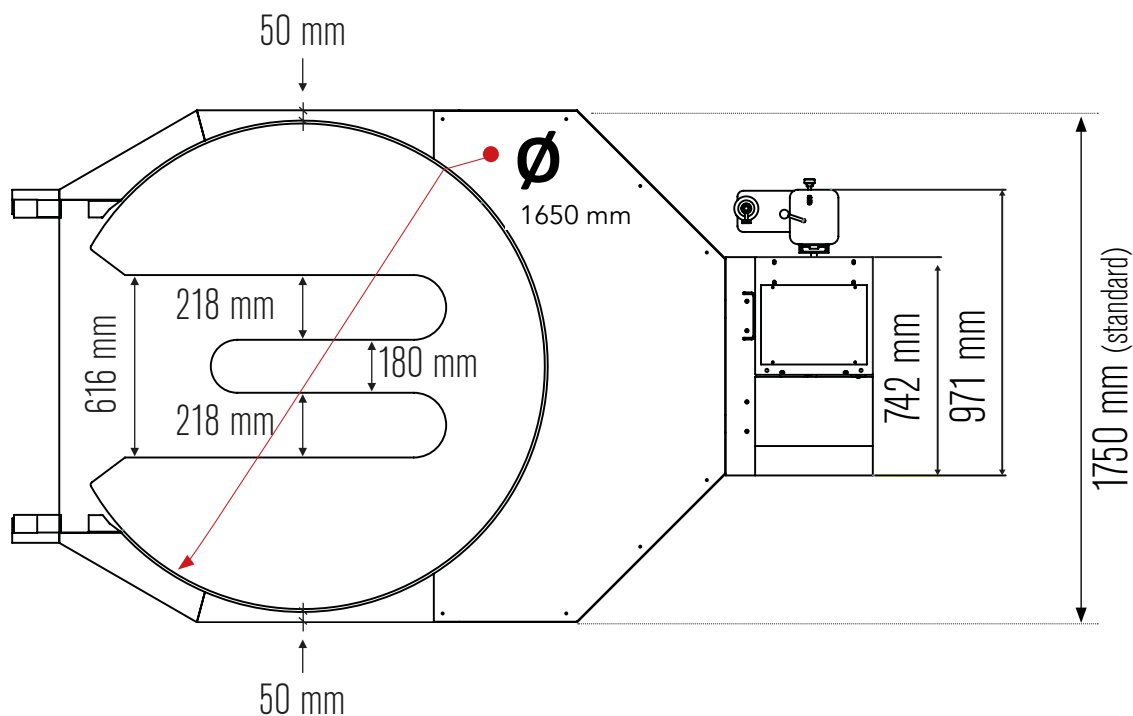


### 3.9.2 > Configuration of the different inputs of the rotary table

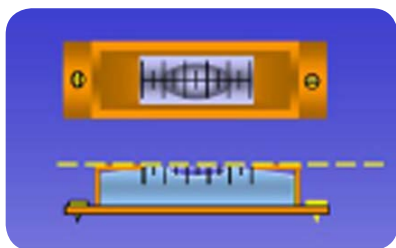
The different types of infeed with transpallet to place the pallet on the rotating table are shown below. The standard model of the machine is sold with a central pallet truck entry.



### 3.9.3 > Layout of the pallet wrapper



### 3.10 > Leveling



After checking the perfect support on the work floor, check the leveling of the machine with a centesimal bubble leveling tool. Place the tool on the fixed part of the machine. When the tool indicates the perfect alignment of the bubble, as shown in the following image, secure the machine firmly.

The leveling of the machine will be optimal when the centesimal bubble has given the following indications:

- a) longitudinal direction:  $0.00 \pm 0.02 / 1000$ ;
- b) transverse direction:  $0.00 \pm 0.02 / 100$ .

### 3.11 > Electrical connection and controls for the abatement of EMC phenomena.



After carrying out the proper cleaning of the machine, proceed with the connection with the distribution network. Before making this connection, make sure that the voltage and frequency supplied by the distribution network correspond to those required.

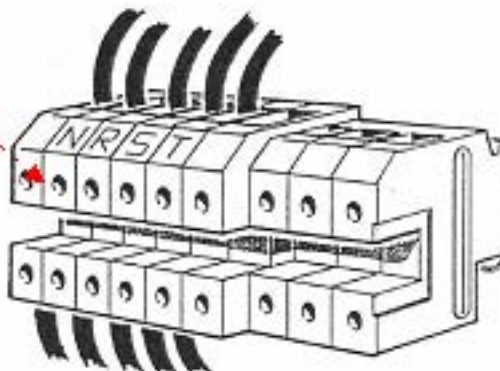
#### Electrical connection

- Open the electrical panel;
- Pass the power supply cable through the relative cable gland;
- Connect the cables to the terminal block;
- Turn the main switch to the ON position after closing the door of the electrical panel.

1 Phase and Earth terminals of the terminal block



1 (Example)



### 3.11.1 > Power supply and grounding

If you want to replace the conductor, the connection to the power line must be carried out inside the power cabinet using the appropriate terminal block provided for this purpose. All cables from the power line must be placed in a special conduit until they reach the electrical cabinet.

It is possible to have more details on the mapping of the terminal block and on the connection points by referring to the wiring diagrams of the Easy Wrap 2000 AW and 2000 BW model pallet wrapping machine.

The execution of the grounding machine must meet the requirements of the CEI 64-8 STANDARD. The earthing of all parts of a system and all operating earths of the user circuits and appliances must be carried out by connecting the respective interested parts to a single earthing system.

It is also necessary to verify that the materials used in the construction of this system have an adequate solidity or are in any case adequately protected.

The connection with the main earth must be carried out in the shortest possible space, making sure that the conductors are not subjected to mechanical stress or subject to the danger of corrosion.

### 3.12 > Working conditions in segregated areas

When setting up and adjusting the machine, the utmost attention must be paid in order to minimize the risks deriving from carrying out operations in normally segregated work areas.

It may be necessary to work in normally segregated areas in the following cases:

- During the setting up of the machine;
- Solving problems of blocking or jamming of the machine;
- During ordinary and extraordinary maintenance;
- During the cleaning phases of the machine.



#### **ATTENTION**

Since it is possible that several people intervene on the machine during the adjustment and set-up phases, it is recommended to always report any type of operation in advance.

Any operation carried out in normally segregated areas must be signaled by placing the appropriate signal on the machine (in a visible position).

## 4. > SAFETY AND MACHINE CONTROLS

### 4.1 > Reasonably foreseeable misuse



It is mandatory to use the machine only for the purposes for which it is intended, that is to wrap pallets using stretch film.

Before proceeding with the use of the machine, the staff is trained according to the following points:

- Read the instructions carefully. Familiarize yourself with the controls and with proper use of the machine;  
Never allow the machine to be used by people who are not familiar with these instructions.



During production, due to possible jams, it is possible to voluntarily access moving parts of the machine. In case it is necessary to remove the wrapping or the platform

- **press the emergency button**
- **if necessary, open the removable machine guard of the pre-stretch compartment, equipped with a safety microswitch.**

Only after the machine has been safely stopped can any jams be removed.

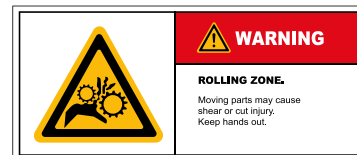
#### 4.1.1 > Safety notice for machine operation

1. Check that the power supply is suitable for the machine. Do not insert the plug into the socket if the power supply voltage is incorrect. This machine adopts 220V single phase system and double color grounding cables to prevent current leakage.
2. Do not rest your feet on the rotary table while the rewinder is in motion.
3. Do not install the machine on a soft surface.
4. Place the pallet to be wrapped in the center of the rotary table.
5. Once the work is finished, turn off the main switch.
6. In an emergency, press the emergency button to stop the machine immediately.
7. Clean the machine daily after use.
8. Do not remove electrical equipment randomly: not only the operation of the winder is compromised, but also the safety for the operator.
9. Inspection and maintenance of electrical equipment is permitted only to qualified personnel.

## 4.1.2 > Important signs

### Mechanical danger

It is forbidden to remove or replace this warning sign. Indicates an area with moving rollers. Be sure to turn off the machine before making repairs. The machine has two warning signs: one is placed at the base of the upright, the other at its top.



This danger sign is placed on the door of the electrical panel. Indicates the danger of electric shock if the door is removed. It is forbidden to replace or remove the label

### Danger of falling

This danger sign is placed on the rotating table of the machine and indicates that it is forbidden to stand on the table while the machine is in operation.



### Prohibition

This prohibition sign is placed on the protective surface of the rotating table chain and indicates that it is forbidden to climb with your feet on it.

### Mechanical hazard

This label is affixed to the opening / closing point of the pre-stretch trolley unit door. It is forbidden to replace or remove the label. Before carrying out maintenance operations, please disconnect the power cord. Do not open the unit door while the machine is running.



NO OPEN WHEN RUNNING



### Indication sign

This signal is placed on the protective plate of the rotary table chain. It is forbidden to remove or replace it as it indicates the direction of rotation of the plate.



### Indication sign

This signal is placed on the front of the rotary table. It is forbidden to remove or replace it as it indicates the access point of the forklift forks.

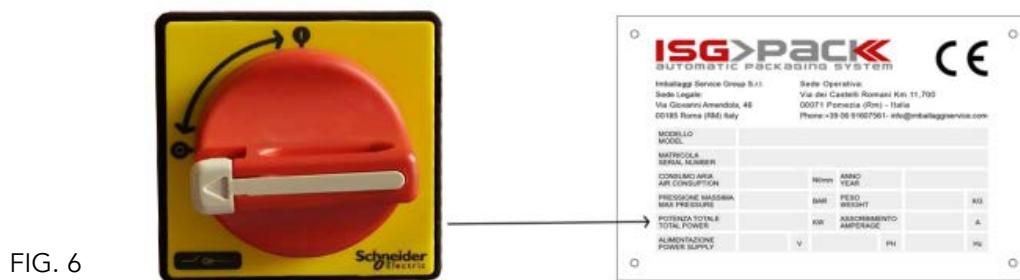
#### 4.1.3 > Arrangement of safety signs



## 4.2 > Electrical connection

### ATTENTION

- Before connecting the power supply, make sure that the main switch of the machine is turned OFF, as in Fig. 3.14
- 
- Verify that the voltage is correct. The voltage information can be found on the plate (Fig. 6);
- When starting the machine for the first time, check that the rotary table rotates in the correct direction (clockwise) by setting the machine in manual mode (See page 23). If the direction is wrong, reverse the two phases in the power cord socket.



## 4.3 > Machine access hatches

The operating areas of the machine, where operator intervention is required during the production, setup or maintenance phases, are protected by opening guards equipped with safety microswitches. To access the inside of the machine, you must first stop the machine by pressing the Stop button and then open the protections.

If the protections were opened with the machine in Running conditions, it would stop immediately, as if the emergency stop button had been pressed, causing the same consequences.

To restart the machine, remove from the machine any products that are badly positioned or stuck, close the open protection (s), press the Reset button and then press the Start button.



### ATTENTION

Never use the protective covers when you want to make a simple stop of the machine.



#### 4.4 > Safety sensors

The machine is equipped with a series of safety sensors used to check the safety of those who work on the machine itself.

Safety sensors have the task of preventing the operation of a machine if a potential danger is ascertained. For this purpose, the safety circuit must be interrupted by means of a safety limit switch. Safety switches are therefore essential components of an interlocking device.

For interlocking device we mean, in this context, for example the interruption of the operation of a machine with an open safety guard; the stop state of a machine is, so to speak, "blocked" and consequently an involuntary start is avoided. In relation to mobile protective guards, this means that, in the event that the doors or protective guards are open, the machine or system cannot be put into operation as long as a dangerous situation attributable to them persists.

Consequently, it is necessary to mount the safety limit switches of a safety guard in such a way as to exclude any malfunctions. Furthermore, the safety limit switches must not be tampered with or bypassed.

The most important characteristic of a safety limit switch is represented by the presence of at least one NC contact with forced operation. These contacts are forcibly opened when the safety guard is opened.

They are connected in such a way as to cause the machine to stop.



#### **ATTENTION**

**Any tampering with or exclusion of the safety device is absolutely prohibited,  
serious risks for the operator may ensue.**

**The manufacturer is not liable for any injuries and / or damage caused by  
tampering and incorrect operations carried out on the machinery itself.**

**Please read this use and maintenance manual carefully.**

The microswitches are present in correspondence with all those protective screens that can be opened to access the machine during maintenance and / or during production.

#### 4.4.1 > Microswitches and photocells

|          |                                                                        |
|----------|------------------------------------------------------------------------|
| (Fig. 1) | Pallet height reading photocell                                        |
| (Fig. 2) | Anti-crushing protection microswitch (detail FIG. 3 Lett. A)           |
| (Fig. 3) | Pre-stretch compartment opening protection microswitch (B)             |
| (Fig. 4) | Upper and lower carriage limit switches (internal side of the upright) |
| (Fig. 5) | Rotary table revolution counter microswitch (under the rotary table)   |
| (Fig. 6) | Transpallet input reading photocell                                    |



## 4.5 > Machine stop in emergency

The emergency stop is a safety device that ensures, once activated, the stop in the shortest possible time of the dangerous elements of a machine. Each machine must be equipped with one or more emergency stop devices. Each device must be activated by a single human action.



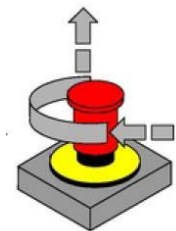
The PALLET WRAPPING mod. EASY WRAP 2000 AW / BW object of this use and maintenance manual is equipped with emergency devices and buttons (red mushroom button).

The emergency button wired on the wrapping machine has an active opening and therefore complies with the current safety standards UNI EN ISO 13850/07 and CEI EN 60204-1.

When the emergency button is pressed, the machine instantly blocks the actuators in the current position and disconnects the power supply.

To restart the machine, proceed as follows:

1. Remove from the machine any products that are badly positioned or stuck.
2. Reset the mushroom button by turning it free.
3. Press the **Reset button**.
4. Press the **Start button**.



However, keep in mind that, by blocking a machine in an emergency, some parts may still remain at risk (for example some areas inside the electrical panels).



### ATTENTION

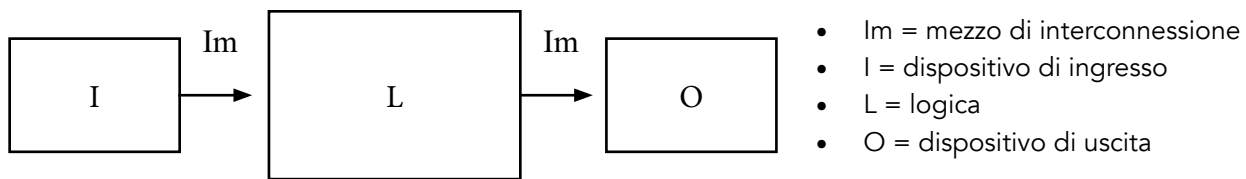
We remind you how improper use of the red emergency mushroom button must be avoided, which must be pressed **ONLY IN CASE OF ACTUAL NEED WHEN THE SAFETY OF THOSE WHO HAVE TO OPERATE THE MACHINE IS ENDANGERED**.

Never use the EMERGENCY BUTTON when you want to make a simple stop of the machine.

#### 4.6 > Performance level

For each safety function to be performed by an SRP / CS (part of a safety-related control system), a required performance level (PLR) must be determined and documented. The determination of the PLR is the result of the risk assessment and refers to the extent of the risk reduction for the safety-related parts of the control system.

In accordo con la norma UNI EN ISO 13849-1 la categoria di sicurezza B ha architettura identificata dal seguente diagramma a blocchi:



Come sistema con categoria B, la funzione di sicurezza è dotata delle seguenti caratteristiche:

- Rispetto dei principi base di sicurezza in accordo alla specifica applicazione;
- Copertura diagnostica nulla;
- MTTFd per canale da basso a medio;
- CCF non rilevante;
- Struttura tipica: canale singolo.

Il verificarsi di un guasto può comportare la perdita della funzione di sicurezza.

Il PL massimo raggiungibile per una struttura di categoria B è: **PL = b**

#### 4.7 > Arresto accidentale della macchina

Durante il ciclo di funzionamento, la macchina può arrestarsi a causa di alcune semplici anomalie che è però necessario rimuovere per poter riprendere la produzione. Eventuali arresti possono essere dovuti ad una delle cause seguenti:

- Intervento del pressostato (Se presente sulla macchina): si verifica per mancanza di pressione nell'impianto
- Intervento dei microinterruttori delle protezioni: è causato dall'apertura di una di esse;
- Intervento del pulsante di emergenza: è stato premuto il pulsante di emergenza.
- Involontario azionamento delle fotocellule di sicurezza presenti all'ingresso della tavola rotante

#### 4.8 > Residual dangers

The machine has been suitably protected in each of its sections. However, some parts cannot, for functional reasons, be fully protected.



#### **ATTENTION!**

Always use the DPI provided.



#### **ATTENTION!**

In correspondence with the material loading / unloading area it is **STRICTLY FORBIDDEN** to operate wearing inappropriate clothing.

To operate in these areas it is obligatory to wear clothing with sleeves equipped with elastic wrists, it is **STRICTLY FORBIDDEN** to wear:

Clothes with grips that can remain attached to moving mechanical parts. Ties or other fluttering pieces of clothing; rings or bracelets that could entangle the hands with moving mechanical parts, or anything that could trigger a situation of danger of crushing or dragging.

#### 4.9 > Electrical danger

Electromechanical and electronic equipment that is under high electrical voltage is placed in the electrical cabinets.

Electrical and mechanical interlocks prevent the cabinet from being opened with the main switch closed, but the power supply bars and terminals upstream of the main switch still remain live.

It is therefore necessary to act with particular caution even after having removed the voltage. The exclusion of the limit switches that electrically interlock the doors of the electrical cabinet is reserved only for specialized maintenance technicians authorized to work on live equipment.

All the junction boxes of the machine are closed and mechanically sealed. A plate warns of the possible presence of a dangerous voltage inside them.

Their opening is in any case reserved for specialized maintenance personnel who, when necessary, will open the main switch located on the electrical cabinet.



#### **FORBIDDEN!**

Passing through people with generic or even non-specific training on the use of electrical equipment.

#### **PRESCRIPTION:**

The intervention of qualified PES personnel (CEI 11-27) is strongly recommended.

Upon request, the manufacturer is able to organize specific courses with the attribution of the PES qualification and suitability for live electrical work.



#### **ATTENTION!**

It should be noted that with the electrical cabinet open there remains a live area inside the cabinet itself; to completely isolate the machine, it must be disconnected from the mains

#### 4.9.1 > Electrical panel



Access to the electrical panel is allowed only to authorized personnel who will be in possession of the key to be able to open it.

It is recommended to disconnect all utilities before opening the electrical panel and in any case, even after disconnecting the utilities, wait a few minutes before proceeding to remove the casing.

It should also be noted that even though the machine object of this use and maintenance manual has been disconnected from the electrical network, there may be some components still live. The maximum attention of the personnel in charge is therefore required.

For any spare parts that may become necessary, contact the supplier of the machine.

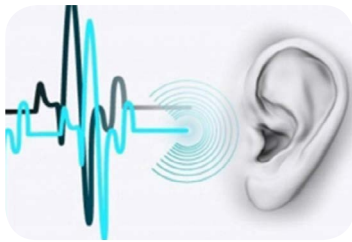


#### **ATTENTION!**

It should be noted that with the electrical cabinet open there remains a live area inside the cabinet itself; to completely isolate the machine, it must be disconnected from the mains.



#### 4.10 > Risk of noise and noise emissions



The machine must be designed and built so that the risks resulting from the emission of airborne noise produced are reduced to the lowest possible level, taking into account technical progress and the availability of noise reduction means, especially at the source.

The machine and the work equipment making up the machine have been designed and manufactured in such a way that the noise level emitted does not reach significant levels with values found in a normal working environment.

In compliance with Legislative Decree 81/2008 in force, Imballaggi Service Group Srl declares that the Easy Wrap 2000 AW and 2000 BW wrapping machine covered by this use and maintenance manual has a noise level of 75 dB (A). Therefore in full compliance with the exposure limit values.

If the LEX noise exposure level reaches or exceeds the value of 85 dB (A) calculated over an 8-hour working day, a risk assessment must be carried out and the necessary measures taken.

It is recalled that in the context of the provisions of Chapter II of Legislative Decree 81/2008, the employer is obliged to assess the exposure of workers to noise at work.

#### 4.11 > Vibration risk

The obligations of manufacturers (which the law associates with that of suppliers) are to produce, sell, rent and license work equipment that complies with current laws and regulations on health and safety at work.

In general, manufacturers must place on the market equipment that complies with the RES of Annex I of the Machinery Directive (implemented in Italy with Legislative Decree 17/2010) or that complies with harmonized standards and equivalent "relevant" provisions - (Article 3, paragraph 1 and 2 of Legislative Decree 17/2010). With regard to vibrations and in summary, manufacturers have the obligation to ensure that:

- the machine is designed and constructed in such a way that the risks due to the vibrations emitted are reduced to the minimum level, in particular at the source, taking into account technical progress and the availability of means (point 1.5.9 of Annex I of the Machinery Directive).
- for certain categories of portable machines held and / or operated by hand, they are accompanied in the use and maintenance manual by the HAV acceleration value emitted when it exceeds 2.5 [m / s<sup>2</sup>] defined according to the appropriate testing standards. If the acceleration does not exceed 2.5 [m / s<sup>2</sup>], it must be reported.

In compliance with the regulations in force, Imballaggi Service Group Srl. Declares that the wrapping machine model Easy Wrap 2000 AW and 2000 BW object of this use and maintenance manual has an HAV acceleration value emitted lower than 2.5 [m / s<sup>2</sup>] .

It is recalled that in the context of the provisions of Chapter II of Legislative Decree 81/2008, the employer is obliged to assess the exposure of workers to vibrations during work.

## 4.12 > Rischi residui

This paragraph illustrates the criticalities present on the machine and the consequent technical measures to be adopted for their resolution. The complete risk analysis (within the technical file) and the resulting residual risk was assessed in accordance with the UNI EN ISO 12100: 2010 standard.

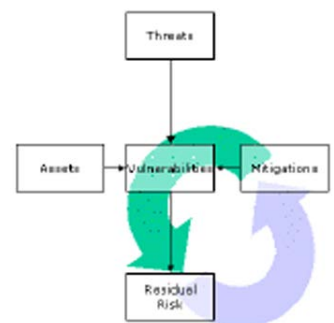
The science of safety is the discipline that studies risk in its various forms, direct and indirect, with the aim of reducing it to the point of canceling it or controlling its consequences.

The complete elimination of risk is mathematically impossible because the risk variables are infinite and imponderable; it is for this reason that we speak of risk reduction.

The risk that cannot be eliminated is called **residual risk**.

The machine has components and parts that inherently present risks for the operator:

- moving parts, protected by appropriate mechanical guards
- parts subjected to high electrical voltages, dangerous to humans, equipped with electrical protection devices,



In addition to the normal protections, the possible residual risks are highlighted on the individual machines making up the machine, by appropriate safety signs.

The clothing of the personnel in charge must comply with all the requirements of current workplace safety laws.

The machines have been designed with safety criteria. For this purpose, most of the machines, and in particular the moving parts, are suitably equipped with passive and / or active protection systems.

In areas where a residual risk remains, it will be necessary to operate with the utmost attention and take into account all the information and suggestions in the manual.

*Pursuant to Annex I of the Machinery Directive 2006/42 / CE:*

*The manufacturer of a machine, or his authorized representative, must ensure that a risk assessment is carried out to establish the safety and health protection requirements relating to the machine. The machine must also be designed and built taking into account the results of the risk assessment. With the iterative process of risk assessment and risk reduction described above, the manufacturer or his authorized representative:*

- establishes the limits of the machine, which includes the intended use and reasonably foreseeable misuse;
- identifies the dangers to which the machine can give rise and the resulting dangerous situations;
- estimates the risks, taking into account the severity of any injury or damage to health and the likelihood of it occurring; assess the risks in order to determine whether risk reduction is required in accordance with the objective of this directive;
- eliminates the dangers or reduces the resulting risks by applying the protection measures in the order indicated in point 1.1.2, letter b).

#### 4.12.1 > Risk evaluation criteria

Risk assessment consists of a series of logical steps that allow the systematic examination of the hazards associated with machinery.

The steps necessary for the risk assessment are:

1. **Determination of the limits of the machine:** Identification of the limits of use regarding the intended use and incorrect use, space limits, time limits, other limits;
2. **Hazards identification:** Systematic identification of possible hazards and dangerous situations that can cause damage during all phases of the machine's life cycle. To identify the dangers it is first of all necessary to identify the tasks of the people who may have access to the machine by placing them in relation to the phases of the life cycle of the machine itself (transport, assembly and installation, commissioning, use, decommissioning, dismantling and disposal);

Following identification of the hazard, the **risk** associated with each hazardous situation is estimated. The purpose of the risk estimate is to establish the magnitude of the risk, expressed as a level, index or score, for each possible accident scenario.

3. Risk estimation: For each hazard concerning the salient compliance aspects the risk must be assessed. The methodology includes:
  - a) The identification of the extent of the damage G based on the consequences of the accident, which determines the line of the table to be taken into consideration;
  - b) The estimate of the three parameters that identify the **CL** class being **CL=Fr+P+Av**; with:
    - Fr**: frequency and duration of exposure (for interventions <10 min downgrades by one except frequency <1 hour)
    - P**: probability of a harmful event occurring;
    - Av**: probability of avoiding or eliminating the damage;

| Frequency | Fr | Event probability | P | Possibility of avoiding the damage | Av |
|-----------|----|-------------------|---|------------------------------------|----|
| Daily     | 5  | Very high         | 5 | Impossible                         | 5  |
| Weekly    | 4  | Likely            | 4 |                                    |    |
| Monthly   | 3  | Possible          | 3 | Possible                           | 3  |
| Annual    | 2  | Poor              | 2 |                                    |    |
| > year    | 1  | neglectable       | 1 | Likely                             | 1  |

The intersection between **G**, severity of the damage and **CL**, the class, can fall within:

- a) Red box - it is necessary to proceed with a remediation (eg realization of fixed protections, etc.).
- b) A yellow box - the use of additional measures is recommended.
- c) A green box - the hazard is properly treated and therefore complies with the Safety Requirements.

| Consequences                                         | gravity  | CL classes (Fr+P+Av) |     |      |       |       |
|------------------------------------------------------|----------|----------------------|-----|------|-------|-------|
|                                                      | <b>G</b> | 3-4                  | 5-7 | 8-10 | 11-13 | 14-15 |
| Death, loss of an eye or arm                         | 4        |                      |     |      |       |       |
| Permanent, irreversible: loss of one or more fingers | 3        |                      |     |      |       |       |
| Reversible: scratches, sunburn-medical intervention  | 2        |                      |     |      |       |       |
| Reversible: heal yourself with a first dressing      | 1        |                      |     |      |       |       |

|                                 |                            |                         |
|---------------------------------|----------------------------|-------------------------|
| <b>DANGER CORRECTLY TREATED</b> | <b>RECOMMENDED ACTIONS</b> | <b>ACTIONS REQUIRED</b> |
|---------------------------------|----------------------------|-------------------------|

#### 4.12.2 > Risks highlighted by the analysis

The following tables list the residual risks found on the machine:

| <b>RISK: ELECTROCUTION BY DIRECT CONTACT</b><br>(During the maintenance phase of the machine, with the electrical panel open, there is the possibility of coming into contact with live electrical parts.)                                  |                                                                                                                                                                          |                      |             |          |                        |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|----------|------------------------|-------------|
| Consequences                                                                                                                                                                                                                                | Severity                                                                                                                                                                 | CL classes (Fr+P+Av) |             |          |                        |             |
|                                                                                                                                                                                                                                             | <b>G</b>                                                                                                                                                                 | 3-4                  | 5-7         | 8-10     | 11-13                  | 14-15       |
| Death                                                                                                                                                                                                                                       | 4                                                                                                                                                                        | <b>X</b>             |             |          |                        |             |
| Permanent, irreversible                                                                                                                                                                                                                     | 3                                                                                                                                                                        |                      |             |          |                        |             |
| Reversible: medical intervention                                                                                                                                                                                                            | 2                                                                                                                                                                        |                      |             |          |                        |             |
| Reversible: heal yourself with a first dressing                                                                                                                                                                                             | 1                                                                                                                                                                        |                      |             |          |                        |             |
| <b>Measures to be taken</b>                                                                                                                                                                                                                 |                                                                                                                                                                          |                      | Recommended |          | Requests               |             |
| Training, access to the electrical panel only by authorized persons, checking the grounding and the electrical system, drafting of safety procedures<br> |                                                                                                                                                                          |                      | -           |          | -                      |             |
| <b>Injury</b>                                                                                                                                                                                                                               | Wounds                                                                                                                                                                   | Contusion            | Fractures   | Crushing | Distortion or luxation | Amputations |
|                                                                                                                                                                                                                                             | -                                                                                                                                                                        | -                    | -           | -        | -                      | -           |
| <b>Pictogram</b>                                                                                                                                                                                                                            |   |                      |             |          |                        |             |

**RISK: Entanglement / crushing.**

(During the maintenance phase of the machine, with the electrical panel open, there is the possibility of coming into contact with live electrical parts.)

| Consequences                                                                                                                                                             |                                                                                                                                                                                                                                     | Severity  | CL classes (Fr+P+Av) |             |      |                        |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|-------------|------|------------------------|-------------|
|                                                                                                                                                                          |                                                                                                                                                                                                                                     | G         | 3-4                  | 5-7         | 8-10 | 11-13                  | 14-15       |
| Death                                                                                                                                                                    |                                                                                                                                                                                                                                     | 4         |                      |             |      |                        |             |
| Permanent, irreversible                                                                                                                                                  |                                                                                                                                                                                                                                     | 3         |                      | X           |      |                        |             |
| Reversible: medical intervention                                                                                                                                         |                                                                                                                                                                                                                                     | 2         |                      |             |      |                        |             |
| Reversible: heal yourself with a first dressing                                                                                                                          |                                                                                                                                                                                                                                     | 1         |                      |             |      |                        |             |
| Measures to be taken                                                                                                                                                     |                                                                                                                                                                                                                                     |           |                      | Recommended |      | Requests               |             |
| Information, use of DPI (gloves), training, drafting of safety procedure. <div></div> |                                                                                                                                                                                                                                     |           |                      | X           |      | -                      |             |
| Injury                                                                                                                                                                   | Wounds                                                                                                                                                                                                                              | Contusion | Fractures            | Crushing    |      | Distortion or luxation | Amputations |
|                                                                                                                                                                          | -                                                                                                                                                                                                                                   | X         | -                    | X           |      | -                      | -           |
| Pictogram                                                                                                                                                                | <div><div><p>NO OPEN WHEN RUNNING</p></div><div></div></div> |           |                      |             |      |                        |             |

**RISK: Cutting.**

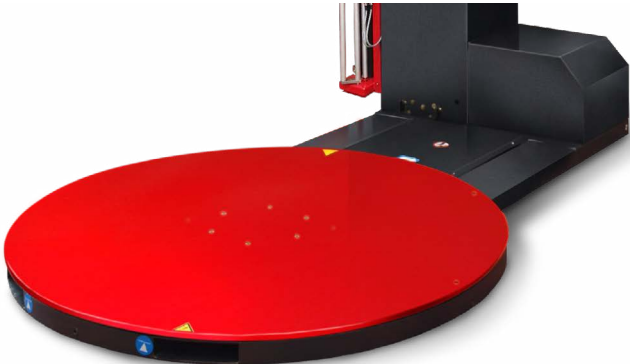
(While the machine is stopped, there is the possibility that the user will come into contact with cutting parts present in the cutting unit)

| Consequences                                                                                          |          | Severity  | Classi CL (Fr+P+Av) |             |                        |             |
|-------------------------------------------------------------------------------------------------------|----------|-----------|---------------------|-------------|------------------------|-------------|
|                                                                                                       |          | <b>G</b>  | 3-4                 | 5-7         | 8-10                   | 11-13       |
| Death                                                                                                 |          | 4         |                     |             |                        |             |
| Permanent, irreversible                                                                               |          | 3         |                     | <b>X</b>    |                        |             |
| Reversible: medical intervention                                                                      |          | 2         |                     |             |                        |             |
| Reversible: heal yourself with a first dressing                                                       |          | 1         |                     |             |                        |             |
| Measures to be taken                                                                                  |          |           |                     | Recommended |                        | Requests    |
| Information, training, drafting of the procedure<br>safety, warning of danger zones,<br>use of DPI    |          |           |                     | <b>X</b>    |                        | -           |
| Injury                                                                                                | Wounds   | Contusion | Fractures           | Crushing    | Distortion or luxation | Amputations |
|                                                                                                       | <b>X</b> | -         | -                   | -           | -                      | -           |
| <b>Pictogram</b>  |          |           |                     |             |                        |             |



**RISK: Fall**

(During standstill or during maintenance there is the possibility that someone can climb above the rotary table and that during the start-up of the latter it may be thrown to the ground.)

| Consequences                                                                                 |                                                                                                                                                                                    | Severity  | Classi CL (Fr+P+Av) |             |                        |             |       |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------|-------------|------------------------|-------------|-------|
|                                                                                              |                                                                                                                                                                                    | G         | 3-4                 | 5-7         | 8-10                   | 11-13       | 14-15 |
| Death                                                                                        |                                                                                                                                                                                    | 4         |                     |             |                        |             |       |
| Permanent, irreversible                                                                      |                                                                                                                                                                                    | 3         |                     | X           |                        |             |       |
| Reversible: medical intervention                                                             |                                                                                                                                                                                    | 2         |                     |             |                        |             |       |
| Reversible: heal yourself with a first dressing                                              |                                                                                                                                                                                    | 1         |                     |             |                        |             |       |
| Measures to be taken                                                                         |                                                                                                                                                                                    |           |                     | Recommended |                        | Requests    |       |
| Information, training, drafting of the procedure safety, warning of danger zones, use of DPI |                                                                                                                                                                                    |           |                     | X           |                        | -           |       |
| Injury                                                                                       | Wounds                                                                                                                                                                             | Contusion | Fractures           | Crushing    | Distortion or luxation | Amputations |       |
|                                                                                              | X                                                                                                                                                                                  | -         | -                   | -           | -                      | -           |       |
| Pictogram                                                                                    | <div></div> |           |                     |             |                        |             |       |

**ATTENTION!**

Always use the DPI provided.



**DO NOT REMOVE THE SAFETY AND WARNING SIGNS ON THE MACHINE**

#### 4.12.3 > Personal protective equipment

Personal Protective Equipment, a definition often substituted by the acronym PPE, means any equipment intended to be worn and kept by the worker in order to protect him against one or more risks likely to threaten his safety or health during work, as well as any complement or accessory intended for this purpose (Article 74, paragraph 1 of Legislative Decree 9 April 2008)



The relevant law is therefore Legislative Decree 81/2008 which provides for its use only when preventive technical and / or organizational measures for collective protection have already been adopted. In other words, DPI should only be used when it is not possible to eliminate the risk.

## 5. ➤ ADJUSTMENTS AND TROUBLESHOOTING

The operations to be carried out to change the box format are necessary whenever there are significant differences in the size of the products to be packaged or when the number of pieces to be grouped changes or the arrangement undergoes variations.

At each format change, it is advisable to check, before any adjustment, that this is actually necessary to avoid wasting time.

To simplify and reduce the time of format change operations, it is advisable to use a format change card where the values for the adjustments to be made to the machine are indicated inside.

All the adjustments on the machine are closely linked to each other, and a single incorrect or superficial variation can cause the complete malfunction of the system.

We therefore recommend, before making any changes, to check all the compromised conditions, such as:

- Product features
- Working conditions
- Wear or breakage of parts

The operational phases of the format change must be carried out by SPECIALIZED TECHNICIANS qualified to carry out operations such as:

- Format Change / Format Optimization

The technicians must stop the machine by disconnecting it and use the PPE provided.

## 5.1 > Safety microswitch adjustment

To limit the elevation and descent of the film reel holder trolley, follow the steps below:

- Loosen the M6 Allen screw in the lower part of the limit switch (Fig. 4.1, POS. 1).
- Slide the limit switch (Fig. 4.1, POS. 2) upwards (along the guide Fig. 4.1, POS. 3) to shorten the distance at which the trolley is lowered. If not, move it down to increase it.
- Tighten the Allen screw previously loosened (Fig. 4.1, POS. 1);
- By loosening the M4 Allen screw (Fig. 4.1, POS. 4) it is possible to adjust the detection point of the limit switch to the left or to the right.



FIG. 4.1

## 5.2 > Troubleshooting

In case of malfunctions or damage, repairs must be carried out by qualified personnel in the electrical, pneumatic and mechanical sectors. Before repairing, make sure there is enough space around the machine to prevent further damage during maintenance by the personnel.

If the machine is to be sent for service, proceed as follows:

- Stop the machine.
- Turn the main switch to "OFF" to interrupt the power supply and remove the power plug.
- Remove the 4 M10 screws located at the base of the column.
- Before reclining the column on the turntable of the machine, place (on the plate) a 4/5 cm polystyrene sheet or two wooden strips, to avoid any damage to the column.
- Place the machine and all moving parts in a crate, ready for transport. Be careful during packing to strap and fix all moving parts correctly in order to avoid movement or damage.

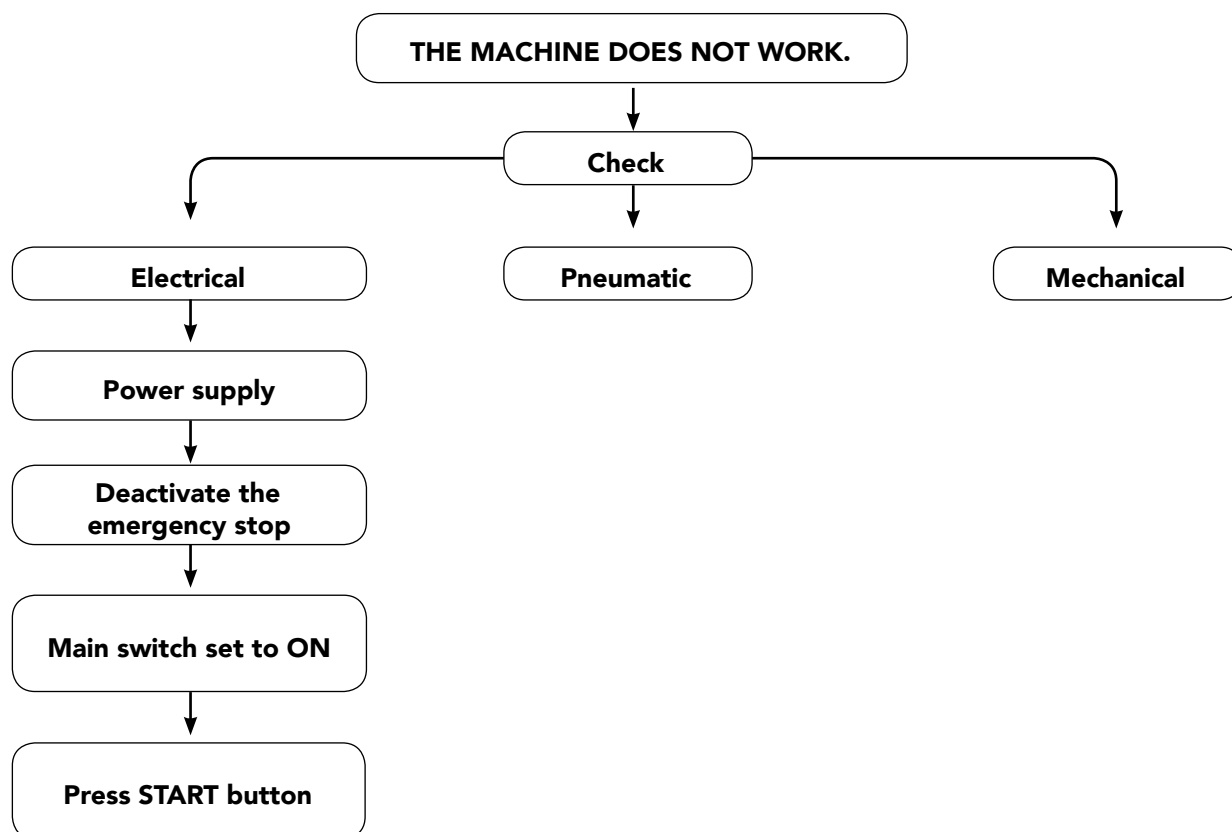
**NOTE:** For the disposal of materials, refer to the regulations in force in the place of use.



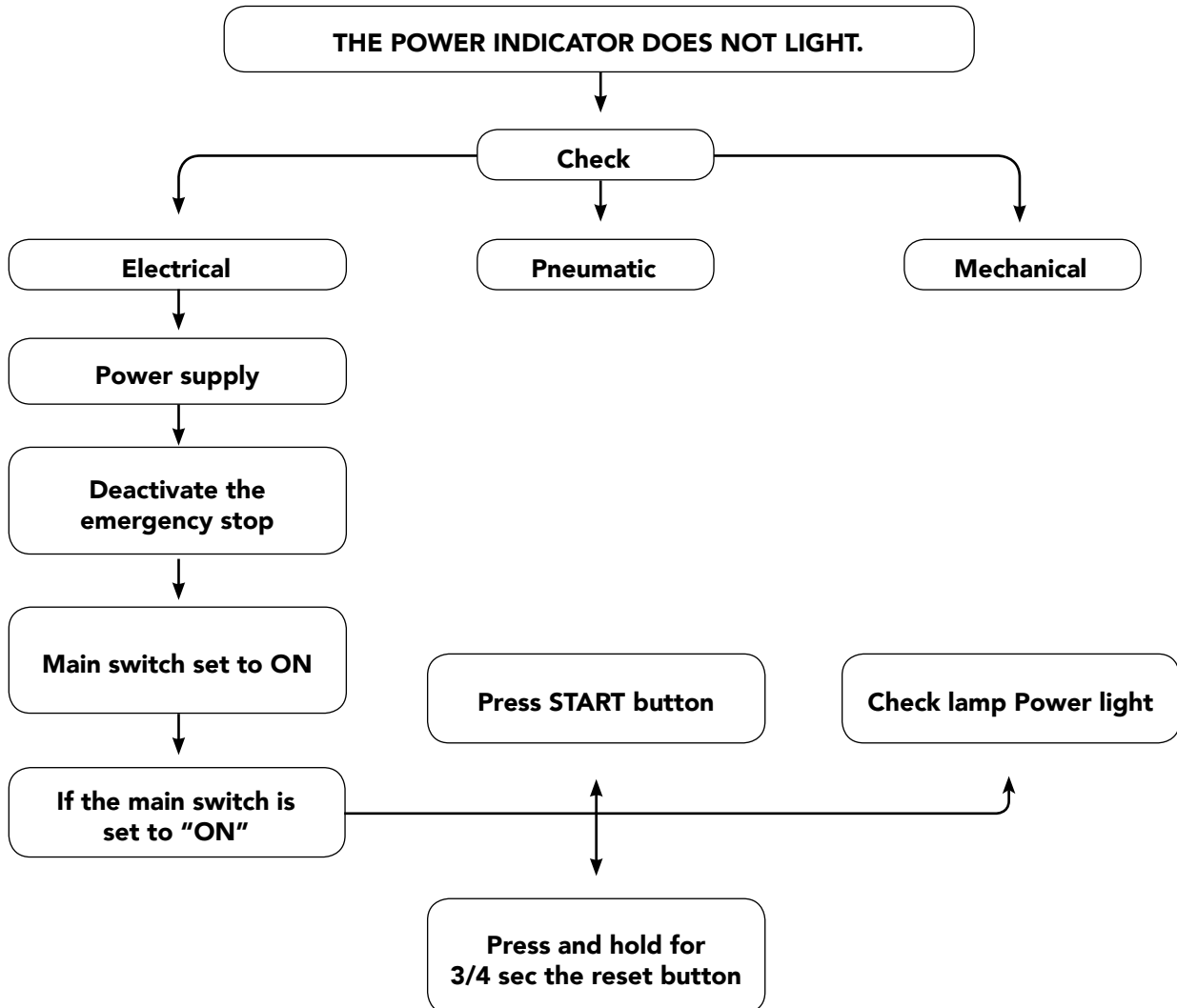
**NOTE:** for the disposal of materials, refer to the regulations in force in the place of use.

### 5.3 > List of possible faults

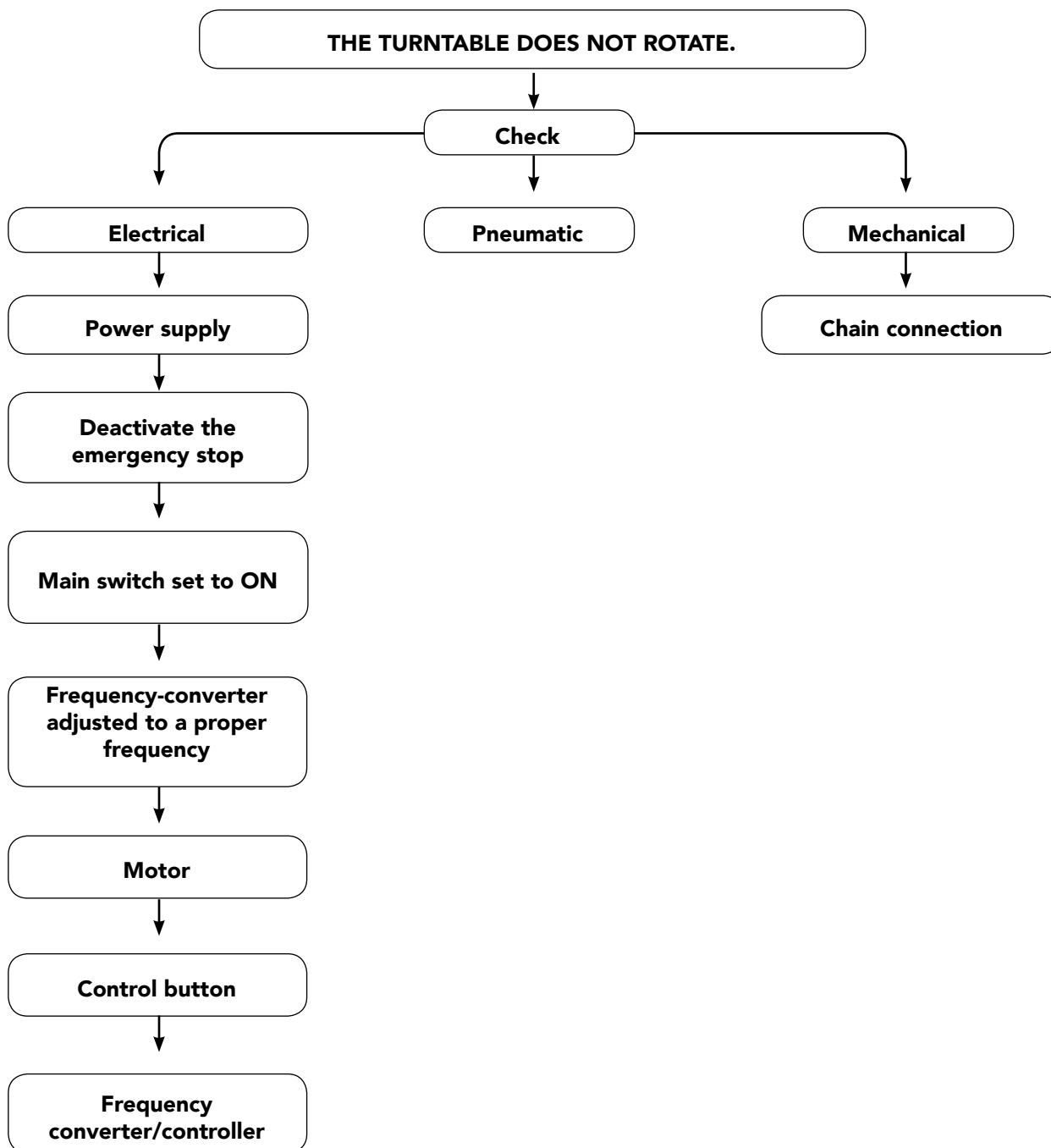
#### 5.3.1 > The car does not work



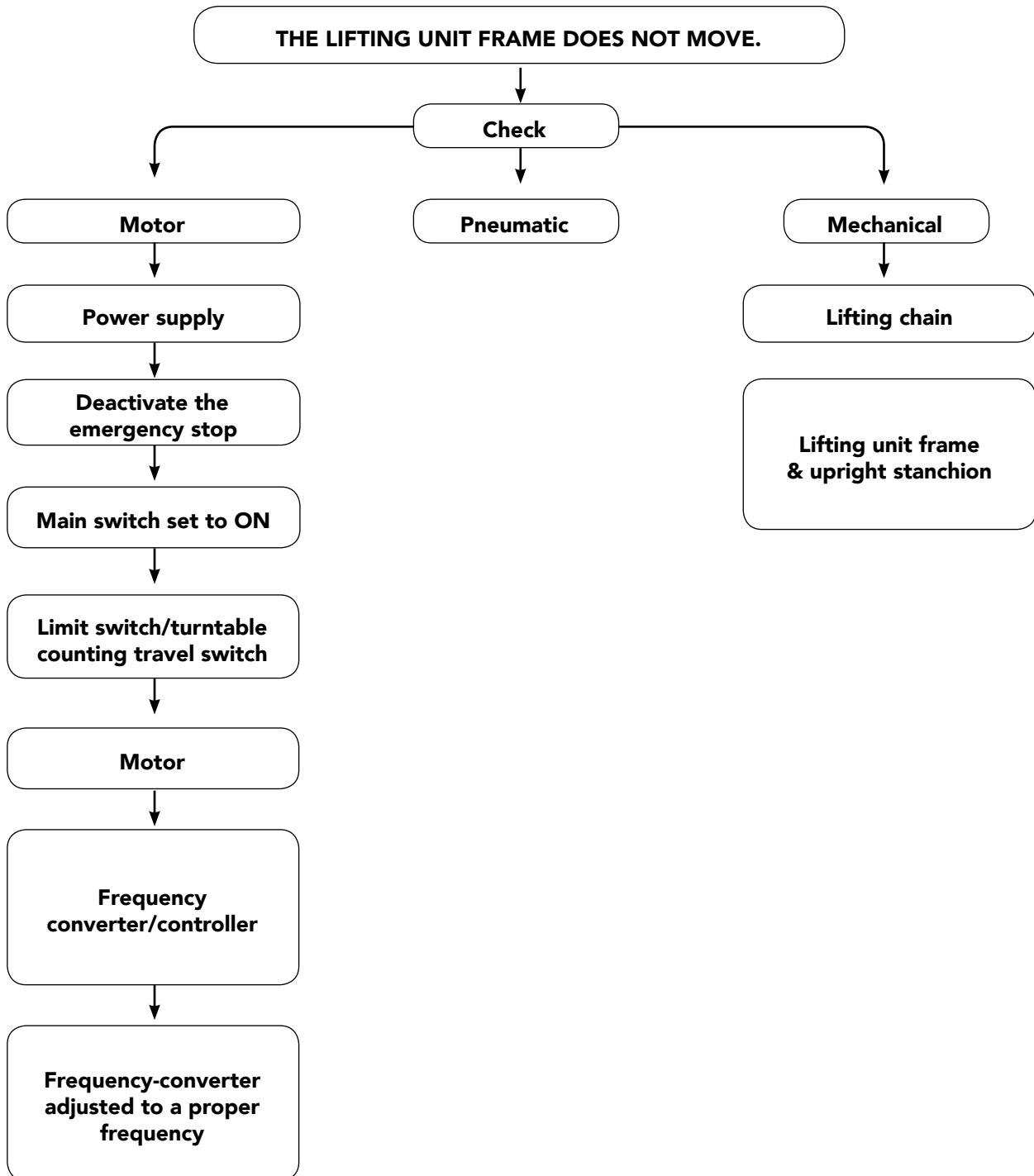
**5.3.2 > Fault description: the power indicator does not light**

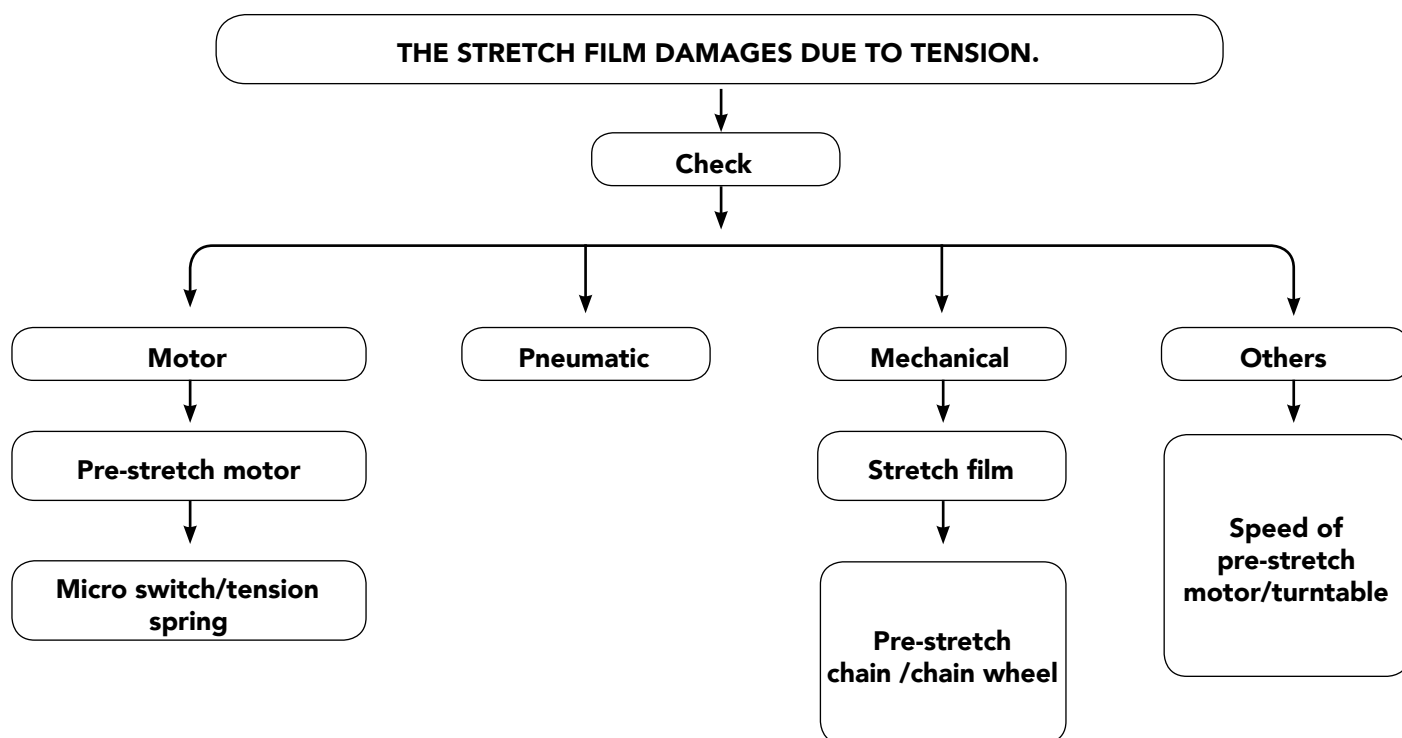
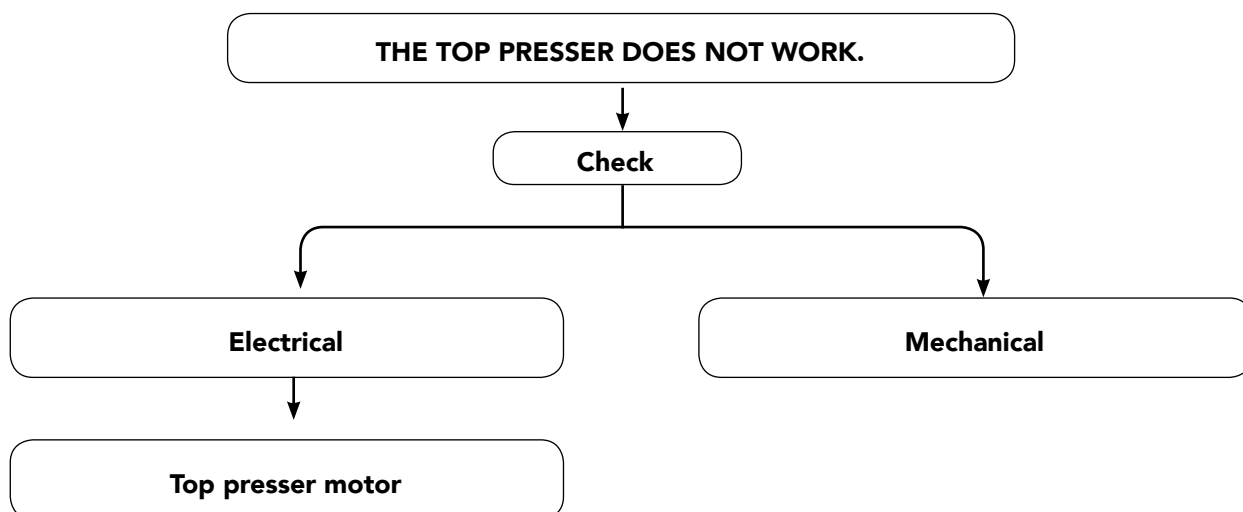




**5.3.3 > Fault description: the turntable does not rotate**

**5.3.4 > Fault description: the lifting unit frame does not move**

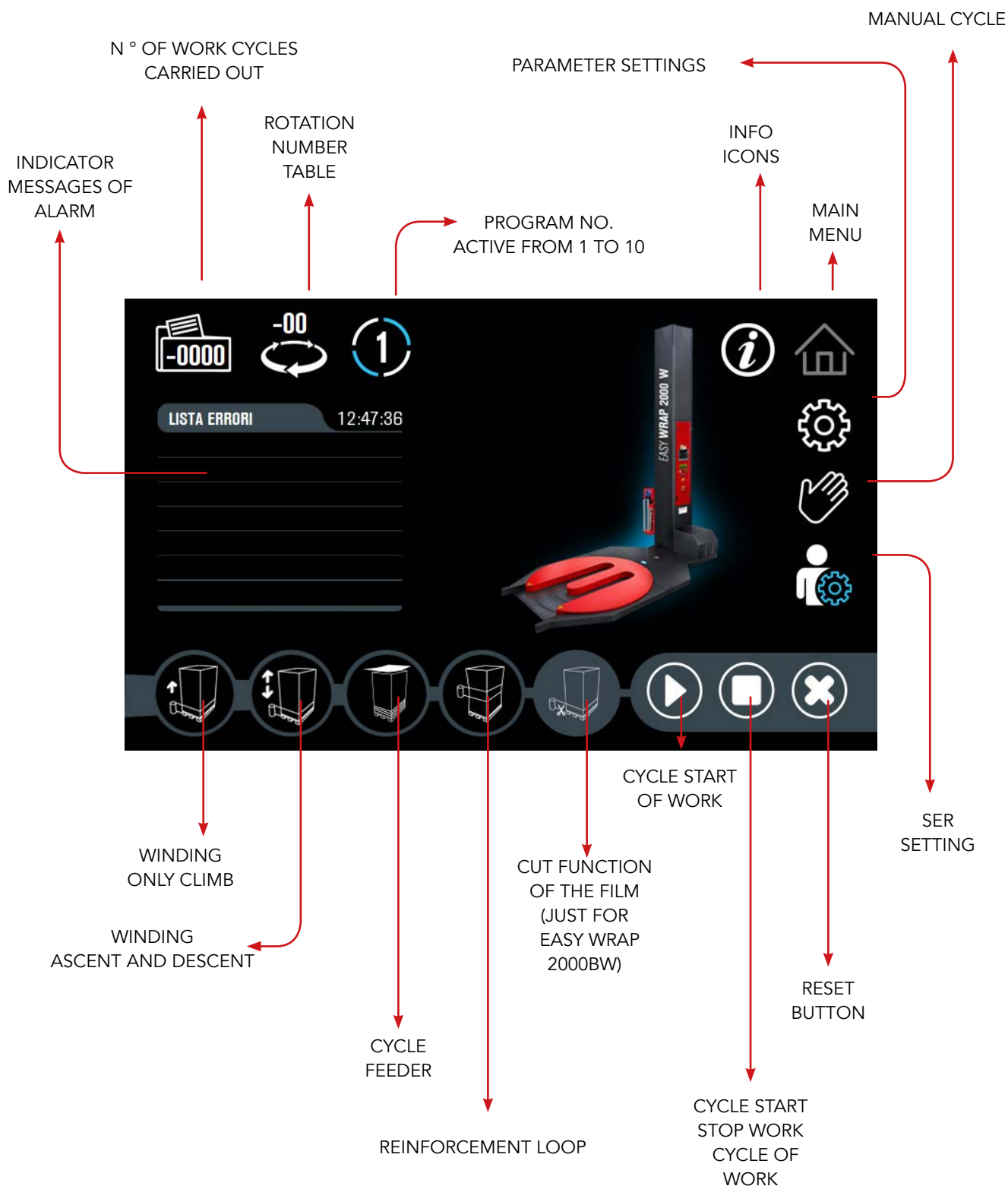


**5.3.5 > Fault description: the stretch film damages due to tension****4.3.6 > Fault description: the top presser does not work**

## 6. > DESCRIPTION AND FUNCTIONS OF THE TOUCH PANEL

### 6.1 > System startup

After selecting the language of use and pressing the access key, the following screen will be displayed:



## 2.13 > Using the machine in manual mode

To use the pallet wrapper in manual mode, press the icon  on the touch screen interface to access the management menu. Fig.3.41 refers to the Easy Wrap 2000AW model while Fig.3.42 refers to the Easy Wrap 2000BW model



FIG. 3.41



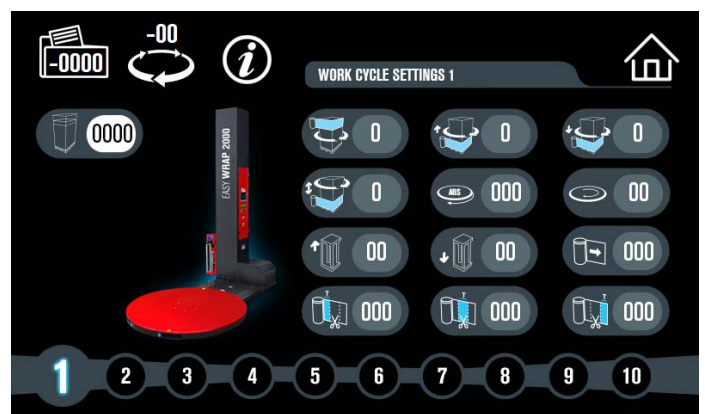
FIG. 3.42

In the screens shown below, it is possible to manage the trolley elevation by pressing the icon  , the trolley lowering by pressing the icon  and the table rotation using the icon  . To stop the table in rotation, press the STOP button on the touch display or the stop button (FIG. 3.42 POS. 6) on the control panel. To return to the main menu, press the icon 



## 2.14 > Automatic work cycle

Access the parameter setting screen via the icon  from the display home. Adjust the number of the desired high and low turns of the film, by entering the parameter next to the icon  and  . Go back to the main screen using the icon  and start the machine with the PLAY button. First check that the objects placed on the pallet have been stacked correctly. Make sure that the weight and height of the objects do not exceed the values allowed by the machine.



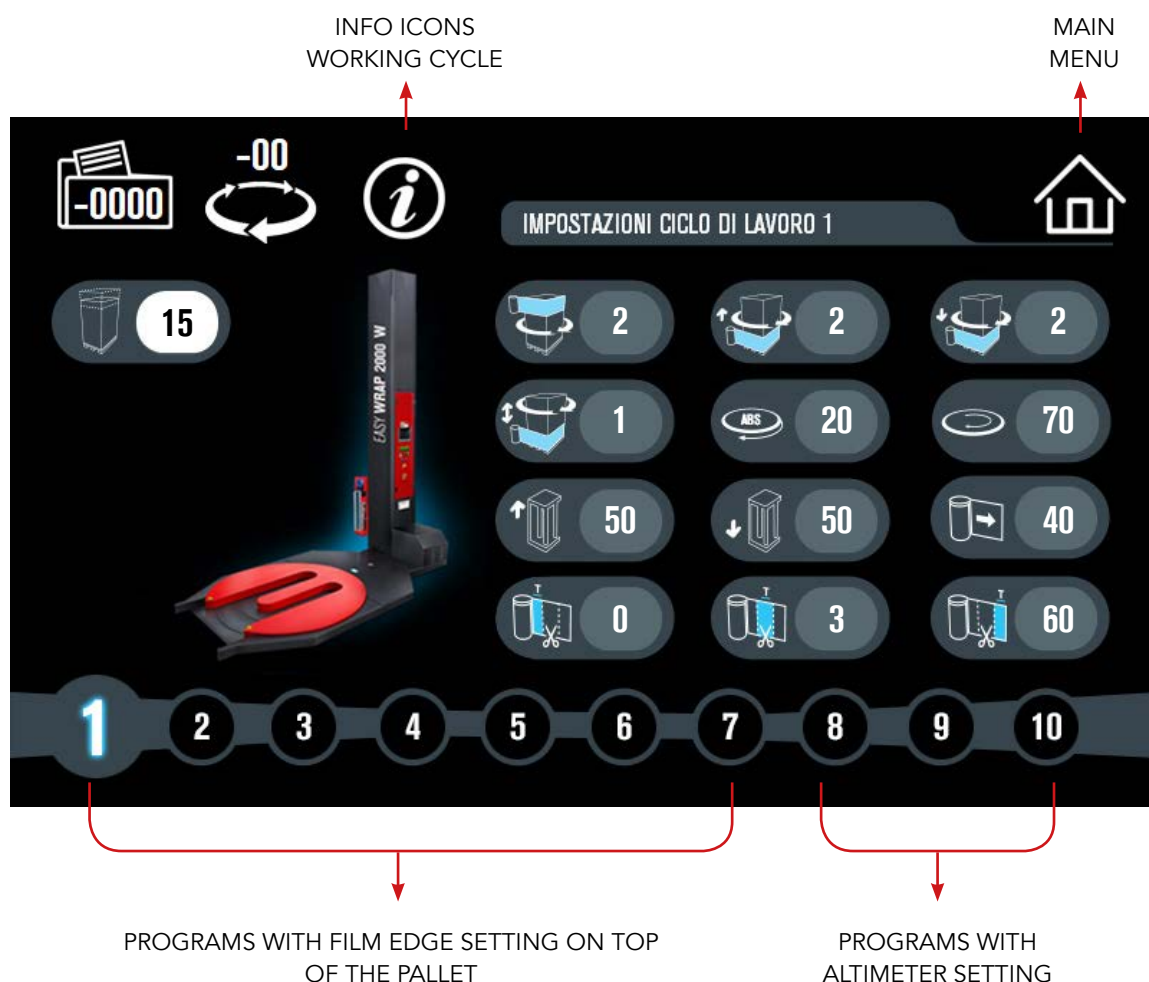
## 6.2 > Work parameters setting

To manage the program settings on the wrapping machine, follow the steps below:

- Click on the active program number on the main page
- In the screen proposed it is possible to parameterize the settings of the functions listed below.
- To manage the parameters, click on the number at the top of the icon to open the numeric data entry keypad.
- Once the desired changes have been made, return to the main page and start the machine's work cycle.



The parameters shown in the screen below are the basic factory settings configured when the machine is delivered.





Number of film turns to be carried out in the upper part of the pallet



N ° of film turns to be carried out at the base of the pallet at the beginning of the work cycle



N ° of film turns to be carried out at the base of the pallet at the end of the work cycle



No. of winding cycles that the reel holder trolley must carry out. By setting the parameter to 1, the trolley will carry out an upward and one downward cycle



Table slowdown time at the end of the work cycle (the parameter cannot be set with values lower than 5 or higher than 25)



Table rotation speed. Default set with the max parameter of 70.



Speed parameter for the ascent of the trolley during the work cycle



Speed parameter for the descent of the carriage during the work cycle



Film feeding speed. Icon available on Easy Wrap 2000BW model only



Automatic film cutting parameter settings. Icons available only on Easy Wrap 2000BW model



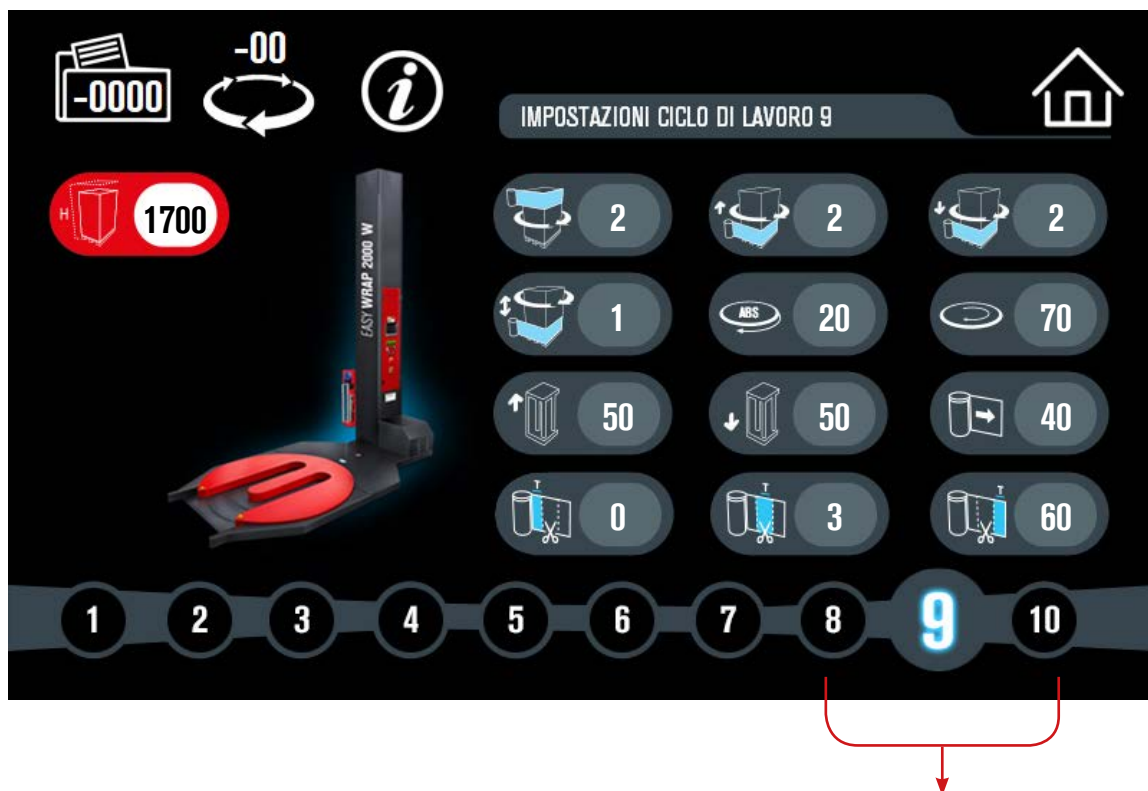
Film edge parameter to be applied in the upper part of the pallet



Altimeter setting parameter.

### 6.2.1 > Altimeter setting for cart

NB: from program 8 - 9 - 10 it is possible to set the altimeter option of the trolley by isolating the reading of the photocell.



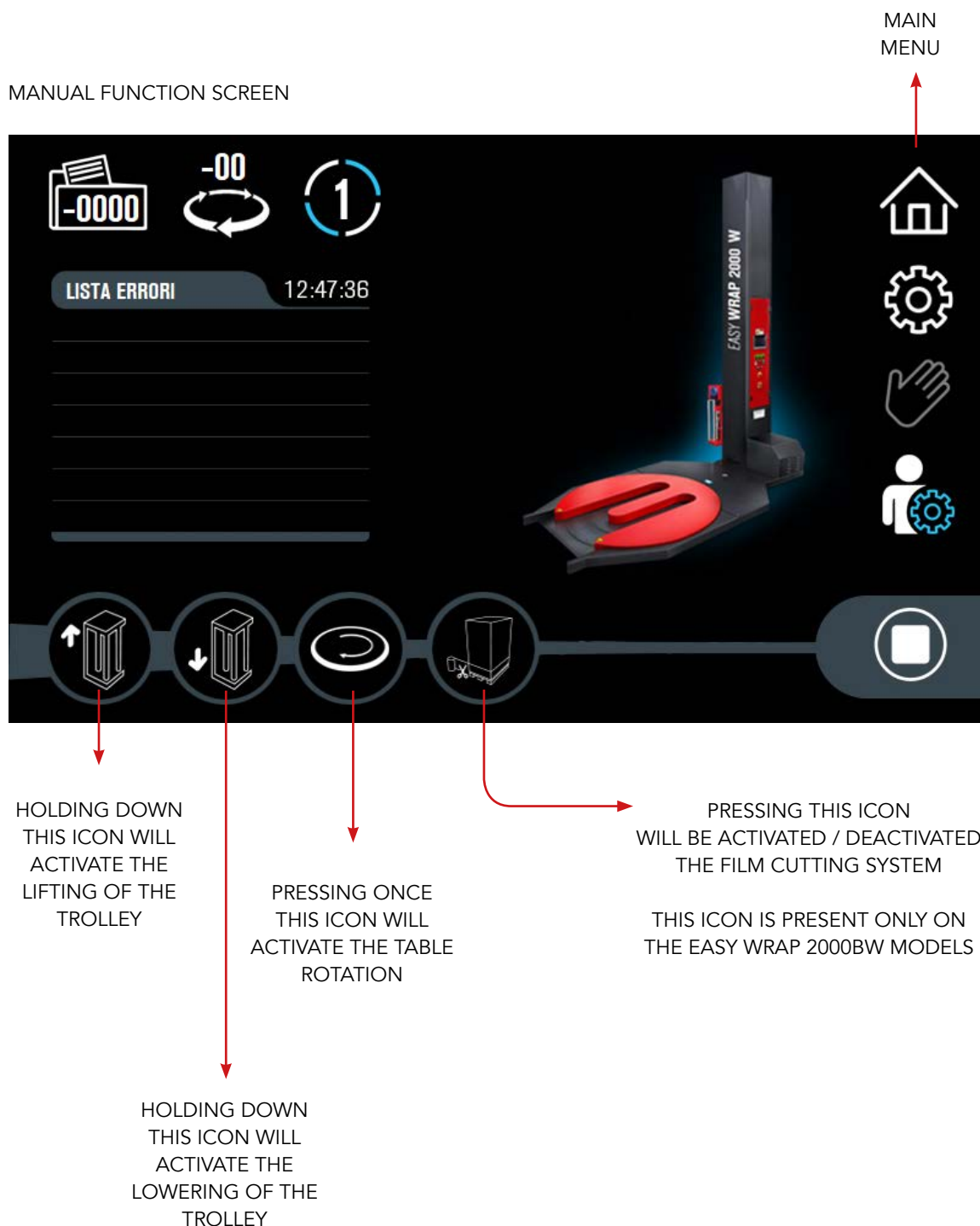
PROGRAMS WITH  
ALTIMETER SETTING

Available only on program 8 - 9 - 10. It allows to define a customized wrapping height of the pallet, excluding the reading of the photocell. (Ex. 1700 for winding up to 1m and 70cm).



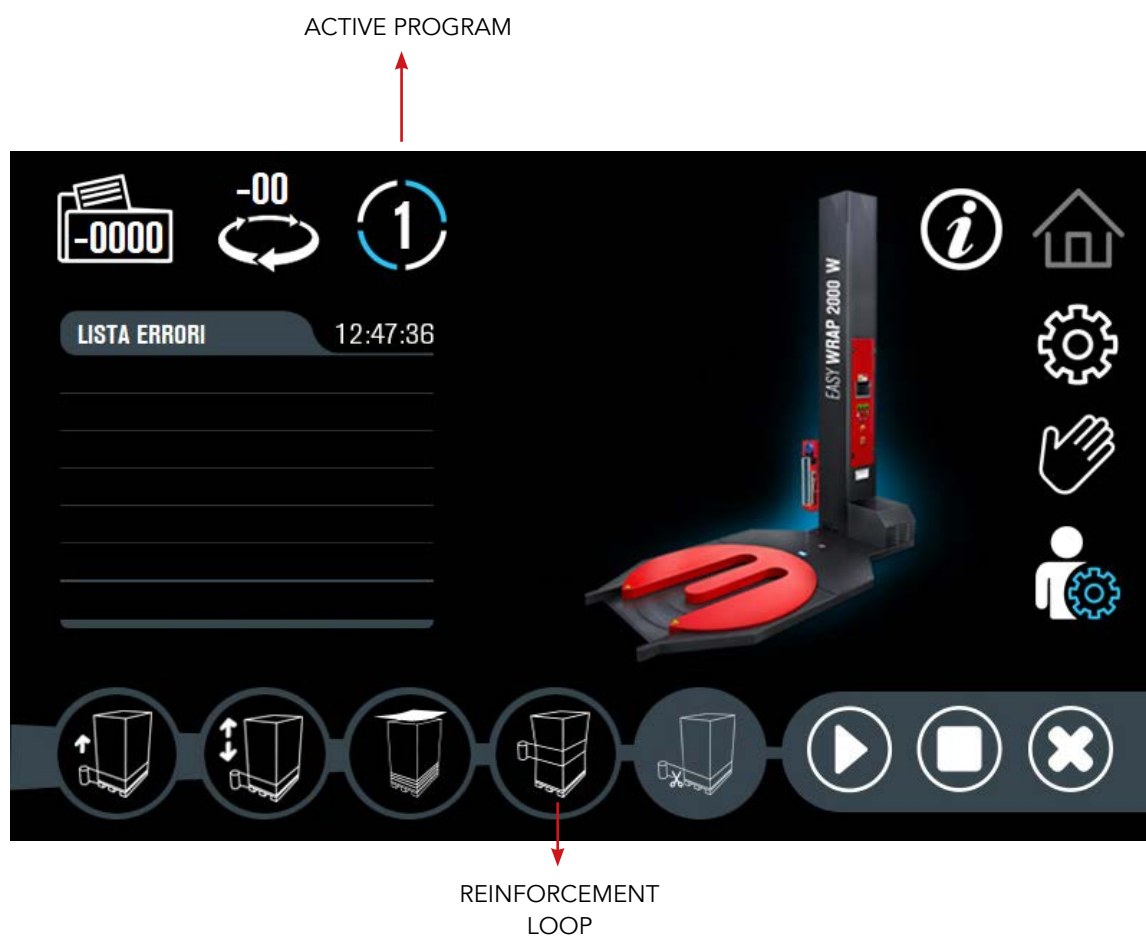
### 6.3 > Manual operation of the machine

To use the pallet wrapper in manual mode, press the icon  on the main page of the touch display. By pressing the icons presented in the screen below, the following actions will be performed:



## 6.4 > Reinforcement loop function

In both models of winders (Easy Wrap 2000AW and 2000BW) there is the function of the reinforcement cycle which allows to increase the turns of film to be applied to a preset height of the pallet. To manage this function, select the program on which to perform this operation and then click on the icon - REINFORCEMENT CYCLE - shown in the figure below.



The screen that will open will be the one shown in Fig. 5.4. By clicking on the numbering input field next to the “Altimeter” icon, a numeric keypad will be displayed (Fig. 5.5) from which you can enter the height on which to apply the reinforcement cycle. Eg: to set a height of 1 m and 30 cm, type 1300 and then the ENT key. In the icon below you can enter the number of reinforcement turns to be applied. By leaving the parameter at “0” no reinforcement cycle will be applied. To start the work cycle, press the START cycle button on the touch panel or the green button on the control panel.



The working parameters on which the reinforcement cycle is based always refer to the active program set by the user.

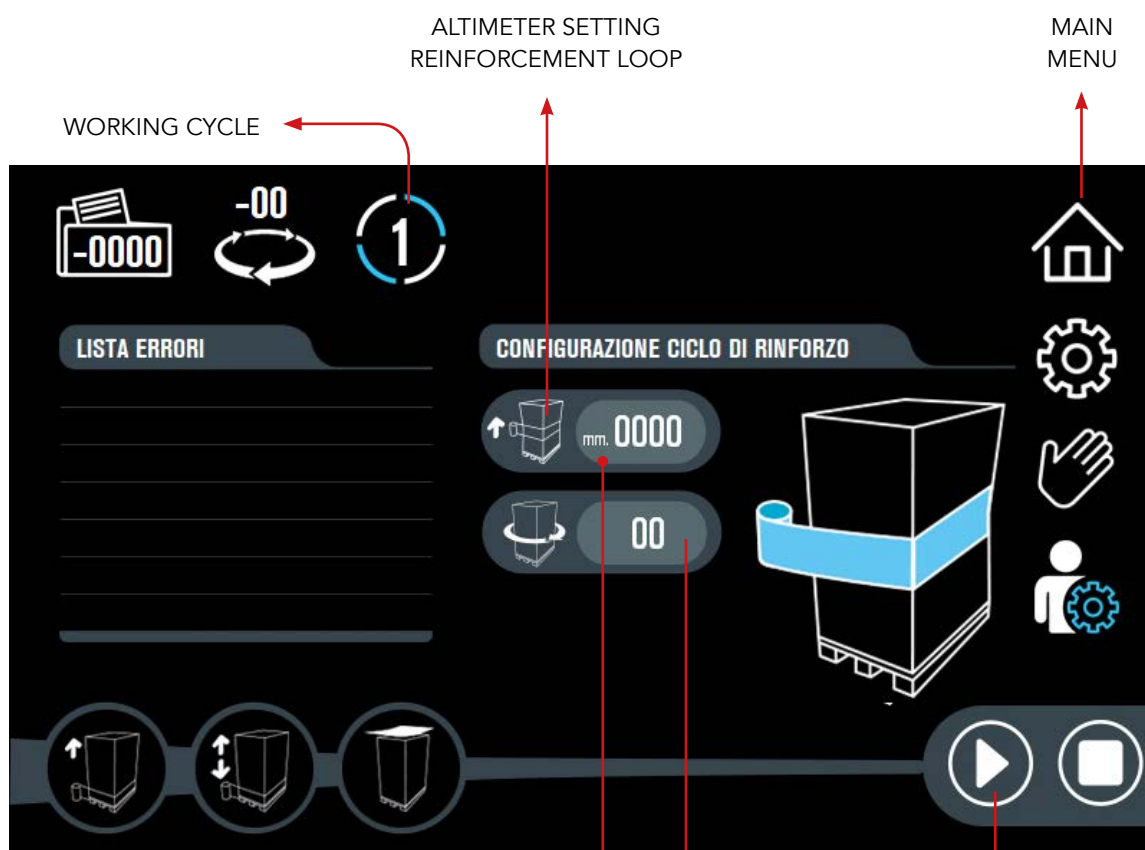


FIG. 5.4

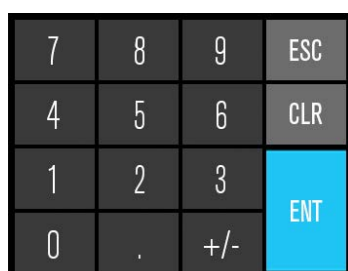


FIG 5.5

## 6.5 > Feeder cycle

To manage the sheet feeder function when wrapping products, click on the icon shown in figure 5.6. By clicking on it, the icon will switch to the highlighted state.

### Action performed by the machine using this function

By pressing the START key from the touch display or from the green button on the machine control panel, the machine will start the pallet wrapping cycle, stopping automatically at the top of the pallet. Once the operator has performed the manual insertion of the top sheet, he will have to press the START button again to restore the activation of the machine which will end the work cycle.



FIG. 5.6

CYCLE  
FEEDER

## 6.6 > Upward winding cycle only



FIG. 5.7

ASCENT ONLY CYCLE

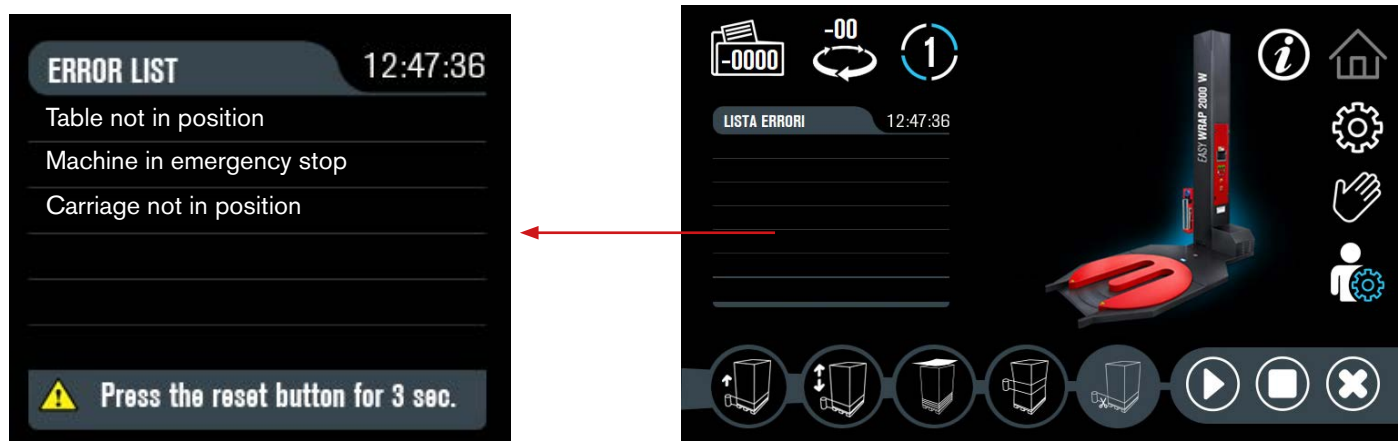
To manage the upward-only pallet wrapping function, click on the icon shown in figure 5.7. By clicking on it, the icon will switch to the highlighted state.

### Action performed by the machine using this function

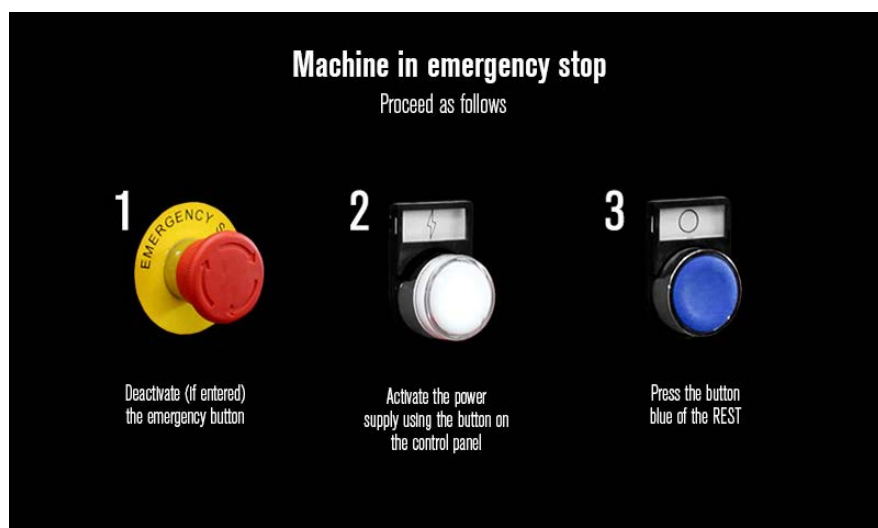
By pressing the START key from the touch display or from the machine control panel, this will start the pallet wrapping cycle, completing the wrapping at the top of the pallet. To restore the carriage to its initial position, simply press the green start button.

## 6.7 > Error list

In all the screens of the touch screen display (except in that of the work cycle settings) there is a section in which any errors detected by the machine before or during working operations will be displayed in real time. The errors will be followed by an Alert that will indicate to the operator how to resolve the problem.



If the machine is stopped manually, by choice of the operator, using the STOP button (red color) on the control panel, even if in an error phase, it can be restarted by completing the work cycle by pressing the START button (green), avoiding to press the RESET key for 3 sec.



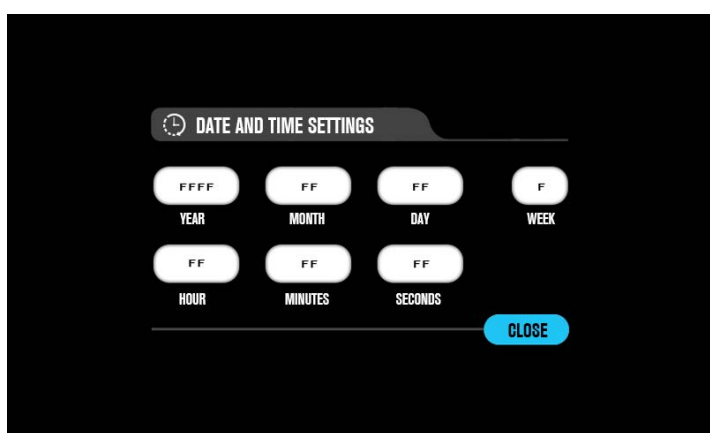
The alarm screen shown on the side is shown only when the winder is in an emergency state, as in the case of the first start-up of the machine, when the emergency button is pressed, the bumper pressure in the lower part of the trolley, etc.

To close the message, simply follow the short procedure shown to reactivate the machine's power supply and make it ready for the new work cycles.



## 6.8 > User settings

By clicking on the icon  on the touch display screens, you can view the section devoted to the settings of the date, time, guda on the insertion of the film reel for trolley with pre-stretch and manual, language settings to be enabled by default when the machine is turned on.



### 6.8.1 > Set date / time / language

By clicking on the Set Time icon, the parameters referring to: Year, Month, day and no. of weeks present in the month. In addition to the date, the update referring to hours, minutes and seconds is also allowed. The updating of these parameters will be reported, as well as within the work screens, also on the Screensaver page.



By clicking on the Italian or English flag icon, the default language to be used at each subsequent access of the wrapping machine will be stored in the system. This setting can be reversed at any time.



### 6.8.2 > Screensaver

The machine display is set with a screensaver that activates every 10 min of screen inactivity. To reactivate the screen, simply tap anywhere on the screen



## 7. > MAINTENANCE

### 7.1 > Maintenance operations

THE SPECIFIC REQUIREMENTS FOR INTERACTING SAFELY WITH THE MACHINE ARE DETAILED IN THE FOLLOWING PARAGRAPHS.

It is absolutely forbidden to carry out maintenance with the machine on unless expressly provided for. Disconnect the power supply and wait 5 min. before carrying out mechanical maintenance operations.



The frequency of intervention on various types of machine components listed in the instruction manual are consistent with the current procedures / regulations in force and applied by the manufacturer.

In the instruction manual, the intervention frequency is expressed in hours and has been determined considering a daily operation of an uninterrupted shift of 8 hours.

For machines operating for 2 or more daily shifts or in any case with frequency other than those considered by the manufacturer, the intervention frequency must be suitably determined.

**If necessary, use only original spare parts**



**ATTENTION!**

Any maintenance, repair and cleaning operations must take place with the power supply disconnected, disconnected from the compressed air network and in good lighting conditions (minimum required illumination: 300 lux).

**IMPORTANT!**

AT THE END OF PRODUCTION THE MACHINE THAT IS THE SUBJECT OF THIS USE AND MAINTENANCE MANUAL MUST BE COMPLETELY CLEAN. THE OPERATION CARRIED OUT CAREFULLY AVOID DAMAGING THE SENSITIVE PARTS THAT COULD COMPROMISE THE CORRECT OPERATION OF THE SAME.

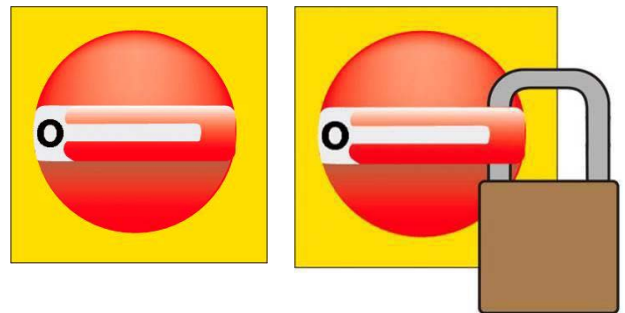
## 7.2 > Lock out – Tag out

In order to keep the machine always in perfect efficiency it is necessary to carry out periodic maintenance interventions. Correct maintenance management reduces downtime and increases the performance of the machine itself. Before proceeding with any maintenance operation it is necessary to minimize the risks by observing the following.

- Disconnect the energy sources not necessary for the operations to be performed;

### Power supply lockout

Turn the power supply selector to OFF and insert the safety padlock in the hole shown in the figure.



- Insert the tags (Tag Out) on the padlock in order to highlight the out of service of the machine;



- Disengage the safety devices only if strictly necessary, and signal the out of service of the machine with special signs;
- Carry out maintenance operations following the procedures described in the machine manual;
- Strictly follow the maintenance instructions given in the relative manual;



### 7.3 > Electrical system maintenance

- Before working on the electrical components, disconnect the power supply upstream of the machine in the OFF position.
- Always carefully check the insulating coatings, the terminal blocks and the tightness of the enclosures.
- This must always comply with the declared degree of protection.
- Immediately replace damaged seals and liners.
- Check and restore if necessary the labels and identification bands of the wires and components, following the indications given on the diagrams (if present).
- Make sure that the danger indications and explanatory plates required by the standards are perfectly legible and well fixed.
- Do not use compressed air for cleaning, use only vacuum cleaners.
- The replacement of fault control components must always be made with parts that comply with the requirements of the EN 60204-1 standard (colors, dimensions, protections, etc.).



#### **ATTENTION!**

If during the installation, positioning or checking the correct handling of the moving parts of the machine it is necessary to operate exceptionally with the main switch in the ON position, pay the utmost attention because in this case the operating personnel will find themselves in conditions of serious danger. . The personnel in charge of maintenance, inspection and repair operations, to safeguard their own safety, must comply with the instructions given on the appropriate signs.

### 7.4 > Mechanical parts maintenance

- Perform disassembly and handling of heavy elements with the aid of trolleys, hoists, cranes or overhead cranes. If detailed drawings, cut outs, etc. are not available. mark each element and note its location in order to avoid reassembly errors.
- Always use wrenches of appropriate size.
- Immediately replace screws and bolts that show signs of wear on the threads and key seats.
- For unscrewing and screwing operations, do not apply pipes or extensions in general to the keys to increase strength.
- If torque wrenches and special tools are used, check that the calibration is suitable for the component. Particular attention must be paid when using pneumatic and hydraulic tools. Before disassembling particularly oxidized units, spray appropriate liquids. It is recommended to use products based on synthetic oils and anti-wear additives to greatly reduce friction, which penetrates and protects in depth, stopping and preventing the formation of rust. (eg. Svitol, etc.).
- Before reassembling, spread a thin layer of lubricating oil on all the mating surfaces. Pay particular attention during assembly to the anti-unscrewing devices used (flat washers, spring washers, etc.), always replacing worn elements. In particular, the nuts and the anti-unscrewing ring nuts equipped with a plastic locking ring must be replaced at each disassembly as the worn material loses its function.
- Always check and test with particular care the efficiency of the lubrication systems and devices.

**ATTENTION!**

Always use the DPI provided.



## 7.5 > Lubrications

When lubricating the machine, avoid over-greasing the mechanical parts, taking care to keep clean those that may come into contact with the boxes or products.

- Oil using oil with viscosity between 20-30 SAE.
- Grease using lithium-based grease.

### 7.5.1 > Bearings lubrication

In the machines it is possible to identify the following types of bearings:

- Bearings exposed to air, so periodic lubrication is required,
- Watertight bearings.

All machine bearings are normally delivered by the manufacturer with the correct amount of lubricant required for normal operation.

### 7.5.2 > Grease lubrication

After removing the machine casings that prevent access to the affected parts, proceed on the basis of the instructions given in this use and maintenance manual.

- The lubrications required on the parts of the machine must be carried out using only lubricants authorized by the manufacturer.
- Periodically check the state of lubrication and greasing of the movement system present.
- Grease lubrication is indicated in all cases where the part to be lubricated is subject to normal speeds and temperatures.
- The grease is characterized by a high viscosity and a greater adhesiveness than the oil so it has the following advantages:
  - It does not require complicated and expensive application arrangements;
  - Protects the part against humidity and contaminants present in the work environment
  - Protects the part for times longer than oil, thanks to its high adhesiveness.

### 7.5.3 > Chain lubrication

Restoring lubrication and protective lubrication for chains are very important operations for the long life and best performance of the chain.

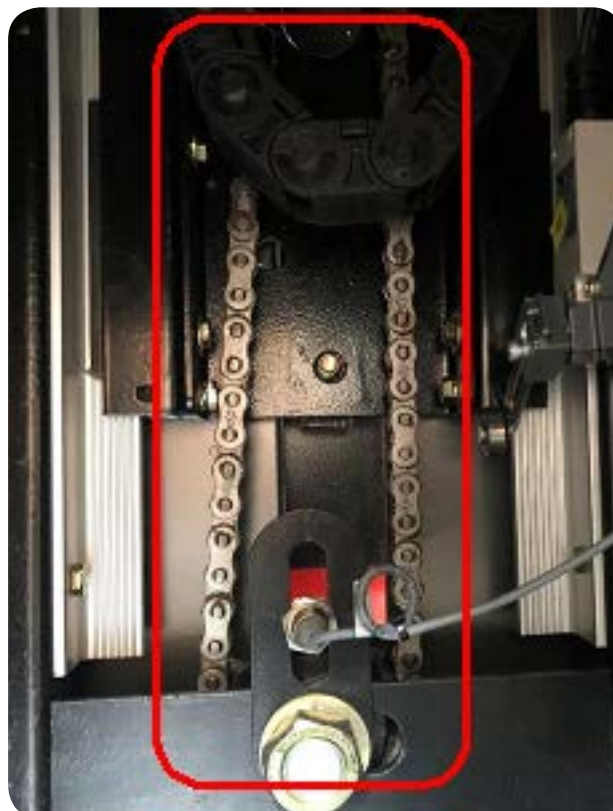
Since the function of the lubricant is to reduce friction, it follows that a lack of lubricant or the use of an unsuitable product causes an increase in friction. This absorbs energy, which is transformed into heat (with a consequent decrease in transmission efficiency) and leads to rapid wear of the metal components.

Furthermore, the increase in temperature makes the lubricant more fluid, which will tend to escape even more from the chain, causing a further increase in friction, and so on.

Consequently, when you notice that the temperature of the chain in operation tends to be a little high, this is a symptom of poor lubrication, so it is necessary to proceed as soon as possible to restore the right working conditions.

Other obvious signs of poor lubrication are a rapid elongation of the chain, the appearance of reddish areas (index of rust), the presence of squeaks and noise of the transmission.

In the following pages there are useful indications for correct use and maintenance with particular references to the recommended products.



**7.5.4 > The following parts should be greased periodically:**

1. Vertical upright sliding chains and blocks.
2. Rotary table chain.
3. Chains at the base of the pre-stretch unit

**7.5.5 > Operating method:**

1. Open the engine casing, carefully cover the chain (pinion) - point **A** - with lubricant, then lubricate the entire chain transmission mechanism. (Fig.6.1) (recommended maintenance every 3 months)
- 2.
3. Lubricate the sliding shoe **B** of the forklift (along the sliding section of component **C**) (Fig. 6.1) with an adequate amount of lubricant. (recommended maintenance every month).

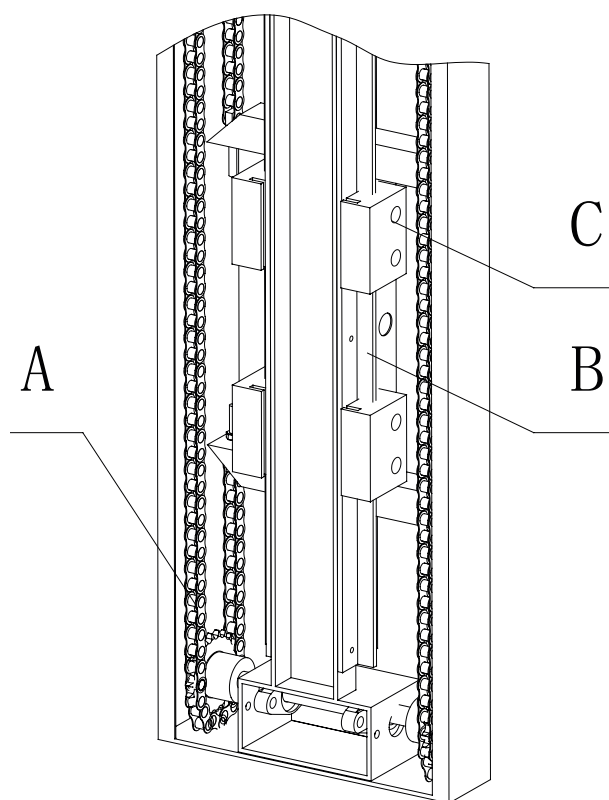


FIG. 6.1

3. Open the cover plate between the rotary table and the upright (fixed by 8 Allen screws). Carefully lubricate the rotary table drive chain with an adequate amount of lubricant. Cover the entire chain drive mechanism with lubricant (Fig.6.2) (recommended maintenance every 3 months)

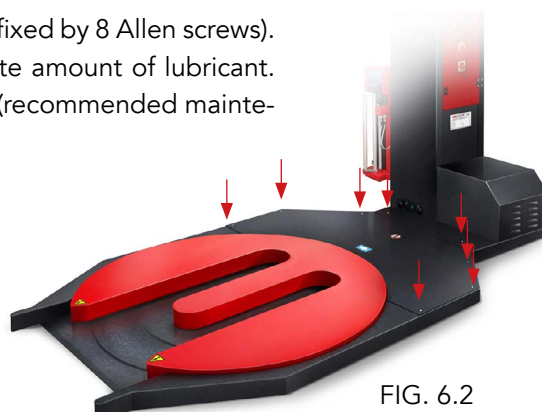
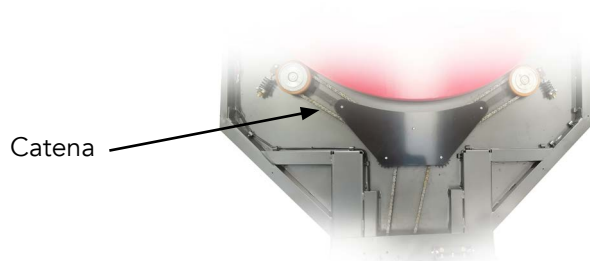


FIG. 6.2

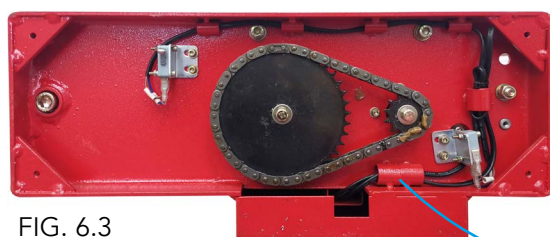


FIG. 6.3



4. Open the carter at the base of the pre-stretch carriage unit, (Only in Easy Wrap 2000 BW models). Carefully lubricate the drive chain at the base of the trolley with an adequate amount of lubricant (Fig. 6.3) (recommended maintenance every month).

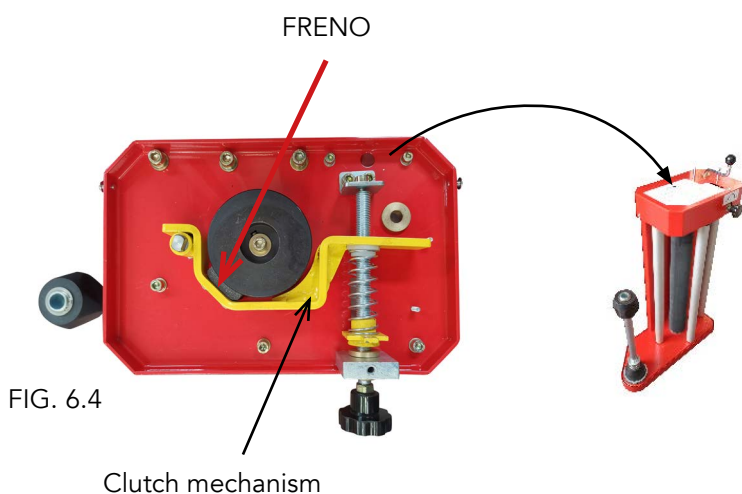


FIG. 6.4

- If the machine uses a mechanical brake film pull carriage (Easy Wrap 2000 AW models only) and there is a reduction in braking force, check the brake attached to the clutch mechanism. If excessively worn, replace it. (Fig. 6.4) (recommended maintenance every 15 days).



FIG. 6.5

- If the rotating unit of the bearing placed under the rotating table (FIG. 6.5) has a diameter of less than 53 mm or emits a strange noise, replace the rollers.


**ATTENTION**

Please pay attention to the order of the components during replacement. To avoid defects or damage, use only original spare parts.

## 7.6 > Periodic maintenance schedule

Strictly follow the periodic maintenance to be carried out on the machine, as described in the relevant manuals. Periodic maintenance includes cleaning, lubrication and any calibration operations.

**Periodic and adequate maintenance of the machine is able to extend its life and avoid anomalies, thus improving production efficiency. Periodically check the main parts of the machine (reel carriage, chains, rotary table, etc.).**

### 7.6.1 > Daily (Or 8 hours).

- **Cleaning of the work area**

Thoroughly clean the work area of the machine.

- **Functional check of the safety switches of the machine**

Check that the machine cannot be started when the guards equipped with safety microswitches are opened.

- **Emergency button functionality check**

Operate the machine and check that by pressing the emergency button, the machine stops immediately.  
Check to be carried out on each emergency button present and wired on the machine.

### 7.6.2 > Monthly (Or every 160 hours).

Clean the machine perfectly, eliminating any production residues.

The intervention points and actions to be taken for routine maintenance of the machine are listed below.

- Check the transmission noise.
- Electric engines.

Clean the grills and cooling fans of the electric motors with compressed air jets. Carry out this operation avoiding that the blow of air brings dirt and fluff into the motors.

### 7.6.3 > Quarterly (Or every 480 hours).

The parts to be lubricated generally:

- Chains
- Wheels.

Carefully cover the chain (sprocket), lead screws, guide rails (slide blocks) and guide pins with lubricant (usually grease). (Perform maintenance once every 3 months).

#### **7.6.4 > Annual (Or 1920 hours).**

##### **1 Lubrication and greasing**

Periodically check the state of lubrication and greasing of the handling system present under the work surface of the machine.

- Check the couplings;
- Check the wear of the bushings;
- Grease the drive gears.

##### **2 Critical bolt tightening**

Check and if necessary restore the tightening of the fastening bolts of the following parts, the loosening of which could seriously damage the safety of people and the machine itself:

- Supports and loosening of protections;
- Gearmotor fastening systems.

##### **3 Supports and bearings**

Check the condition of the closed bearings and anti-friction bushings. Check that there is no noise or excessive play, in which case replace it.

##### **4 Gearmotors**

Check that the lubricant level reaches the appropriate control lights and, if necessary, top up with specific lubricants. Never mix oils of different types and / or brands. Every 3 years replace the oil completely. Also check the absence of lubricant leaks and abnormal play or noise.

The functioning and the duration of the machine depend in a decisive way on the perfect cleaning, on the lubrication and on the correct registration of all the moving parts.

If anomalies or worn parts are found during the inspection operations, it will be necessary to replace them by contacting our assistance service.

##### **5 Check the integrity of the microswitches**

Check the efficiency, integrity and fastening of all safety microswitches. Failure to operate these devices could seriously harm the safety of people and the machine itself. In case of uncertainty, always choose to replace the device.



##### **ATTENTION**

Preventive maintenance action: Every five years, however, provide for the total replacement of all the microswitches present on the machine.

### 7.6.5 > Articoli soggetti a manutenzione e sostituzione da parte del personale tecnico

| N° | NAME OF PART TO BE REPLACED | CODE                  | REMARKS |
|----|-----------------------------|-----------------------|---------|
| 1  | Film positioning plate      | FGA50-001350000.000.6 | 2       |
| 2  | Straining ring              | FGA50-001380000.000.9 | 1       |
| 3  | Roller                      | FGB50-000130000.000.9 |         |
| 4  | Positioning check ring      | FGP38A008300000000    | 1       |
| 5  | Upper fixed ring            | FGP18WG00200000006    | 1       |

- Effettuabili solo da tecnici specializzati

| NO. | NOME    | CODICE           |  |
|-----|---------|------------------|--|
| 1   | Bearing | 6201 with a neck |  |
| 2   | Bearing | 6005             |  |
| 3   | Chain   |                  |  |

#### CAUTION:

Please pay attention to the order of the components during replacement, following the illustration provided. In order to avoid any problems or damage, use original spare parts.



#### ATTENTION

If the machine breaks down, call in personnel with professional knowledge in the electrical and mechanical fields to repair the fault. Make sure that the machine has enough space around it for maintenance and repair operations, also to avoid risks to personnel.



## 7.7 > Recommendations

During the running in it is necessary to make sure, from time to time, that all the screws are well tightened and if not, tighten them properly.

After a short time, check that they are still tight and if they have loosened it is absolutely necessary to search for the causes before resuming normal operation.

## 7.8 > Extraordinary maintenance

This definition includes all maintenance interventions that are necessary to eliminate an expected or sudden malfunction of the machine and in any case to deal with situations of abnormal wear, including those that fall under the warranty conditions.

When carrying out maintenance interventions that involve the disassembly and reassembly of substantial parts of the machine, refer to what is explained in the chapter dedicated to installation and in particular the paragraphs relating to transport, assembly and disassembly, start-up and testing.

This chapter contains a collection of all the peers that make up the machine, which is essential in the case of intervention on the latter. Do not forget to bring the machine back to its previous operating and safety conditions, making appropriate reference to what has been said in the previous chapters.

## 7.9 > Destruction of the machine

The demolition of the machine does not require special procedures, as it is built almost entirely in non-polluting material (metal carpentry).

However, we recommend that you adhere to the following rules:

- Components in good condition can be recovered for possible reuse;
- The metal parts can be treated as recoverable waste;
- The plastic and rubber parts (typically present in the electrical system) must be treated separately.
- The components used for the packaging (almost all made of wood) can be recovered for possible reuse;
- The components in contact with polluting parts (oils, solvents, etc.) must be treated in compliance with the
- Regulations in force in the place of installation of the machine before being disposed of as non-polluting waste.

## 7.10 > Material digestion



The disposal of residues of the materials used (resins, solvents, diathermic oil and lubricants, etc.) and products (scraps and scraps of paper, fabric, finished products, etc.) must be classified for toxicity. Toxic materials must be disposed of in compliance with the regulations in force in the place where the machine is installed, using specialized industries officially authorized to dispose of waste.

From 1 June 2015, the Regulation No. 1272/2008 of the European Parliament CLP (relating to the classification, labeling and packaging of substances and mixtures) replaces the previous decree 1999/45 / EC (the DPP: Directive on dangerous preparations ) for the classification, labeling and packaging of mixtures:

- substances need to be classified only in accordance with the CLP Regulation;
- mixtures must be classified, labeled and packaged only in accordance with the CLP Regulation, however mixtures already classified, labeled and packaged according to the PLR and placed on the market (ie "on the shelves") before 1 June 2015 only need to be re-labeled and repacked by 1 June 2017;
- Classifications of substances and mixtures according to the CLP Regulation must be provided in the safety data sheet. Registrations submitted before 1 December 2010 must contain the classification and labeling in accordance with the DSP;
- applications for authorization submitted after 1 June 2015 must contain only the classification in accordance with the CLP Regulation.

Below are the new pictograms compliant with CLP and commonly used for all products considered toxic.



The CLP Regulation concerns the supply and use of chemicals and mixtures but does not include transport. The classification for transport is governed by the Framework Directive 2008/68 / EC which implements the European agreement on the international transport of dangerous goods by road (ADR), the regulation on the international transport of dangerous goods by rail (RID) and the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN).



### ATTENTION!

It is absolutely forbidden to discharge toxic waste into the drainage pipes and downspouts. The materials to be scrapped without certification can be disposed of automatically by resorting to municipal landfills.

### **7.11 > Manufacturer's warranties**

The company undertakes, declares and guarantees that the aforementioned material supplied is free from material and manufacturing defects.

This warranty does not apply to accessories, parts or materials purchased from the seller, unless they are manufactured in accordance with the supplier's plan. To the extent that purchased parts or accessories are covered by the manufacturer's warranty, the seller may extend the warranty for the buyer.

The warranty is valid for 12 (twelve) months from the date of shipment of the material. In any case, it does not cover damage caused by the customer's inexperience or damage resulting from improper use of the appliance. The warranty does not cover damage caused by failure to comply with the installation and connection procedures to systems (electrical, etc.) and with what is specified in the operating manual.

In case of replacement of parts of the system, it is always necessary to use original spare parts.

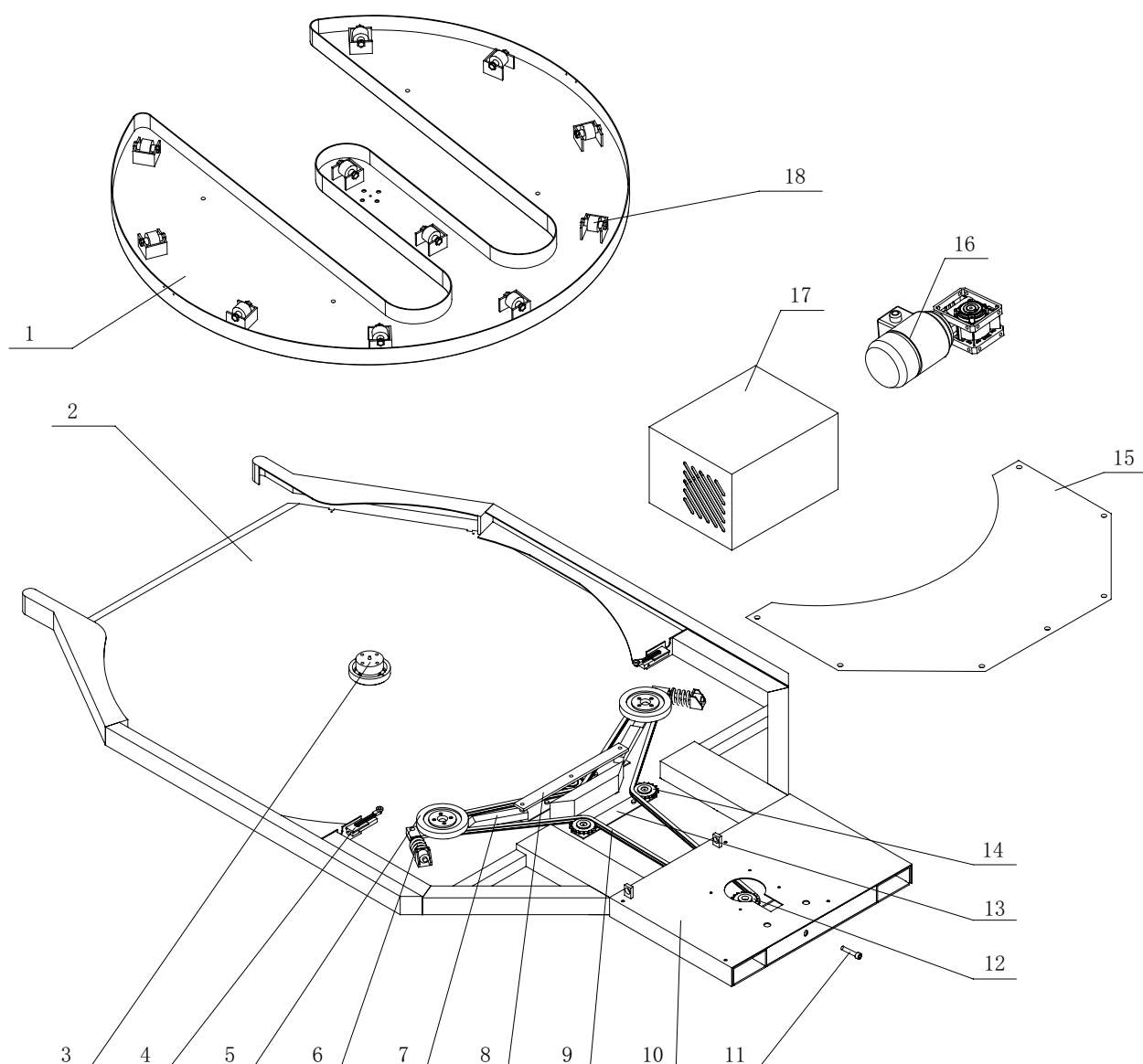
Spare parts that are not original or not approved by the manufacturer, may have characteristics that are not suitable and can cause accidents with serious consequences.



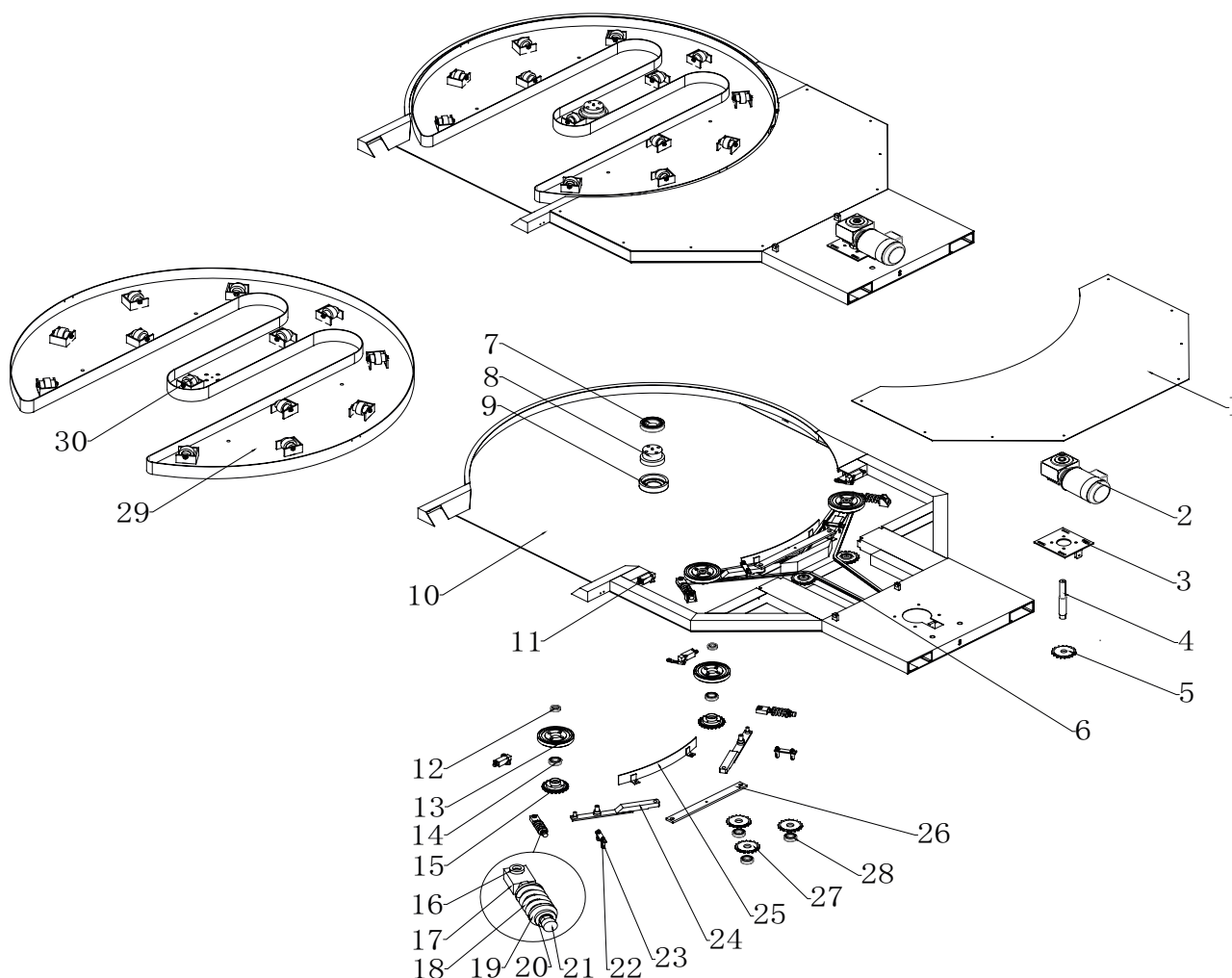
## **EXPLODED DRAWINGS - COMPONENT LISTS WIRING DIAGRAMS AND DIAGRAMS**

## 8. ➤ ELENCO DELLE PARTI

### 8.1 ➤ M-shaped base unit (W6 - 180°)



| RIF. | PARTE N°                       | DESCRIZIONE            | QT. | OSSERVAZIONI                                         |
|------|--------------------------------|------------------------|-----|------------------------------------------------------|
| 1    | Turntable                      | FGD41-0000000000.000.9 | 1   |                                                      |
| 2    | Base                           | FGB80-0000000000.000.9 | 1   |                                                      |
| 3    | Main shaft                     | FGB79-0050500000.200.9 | 1   |                                                      |
| 4    | Counter travel switch          | TZ-918                 | 2   | TE                                                   |
| 5    | Main roller                    | FGB79-0051500000.200.9 | 2   |                                                      |
| 6    | Spring                         | FGB79-0052000000.000.9 | 2   |                                                      |
| 7    | Roller tension bracket         | FGB79-0050200000.001.9 | 2   |                                                      |
| 8    | Central fixed frame            | FGB79-000001200.000.9  | 1   |                                                      |
| 9    | Chain                          | 10A - 226 sections     | 1   |                                                      |
| 10   | Cover plate 1                  | FGB83-000001100.311.9  | 1   |                                                      |
| 11   | Main motor adjusting screw rod | M10x50                 | 1   |                                                      |
| 12   | Main chain wheel               | FGB79-0051000000.000.9 | 1   |                                                      |
| 13   | Tension wheel base             | FGB79-000001300.000.9  | 4   |                                                      |
| 14   | Central chain wheel            | FGB79-0051200000.000.9 | 3   |                                                      |
| 15   | Cover plate 2                  | FGB79-0000100000.000.9 | 1   |                                                      |
| 16   | Turntable motor                | YS7134B14/ NMRV050     | 1   | 370W                                                 |
| 17   | Motor cover                    | FGC19-0037400000.000.9 | 1   | Used for the PS-type and IS-type small upright posts |
| 18   | Roller assembly                | FGB79-000001900.000.9  | 11  |                                                      |

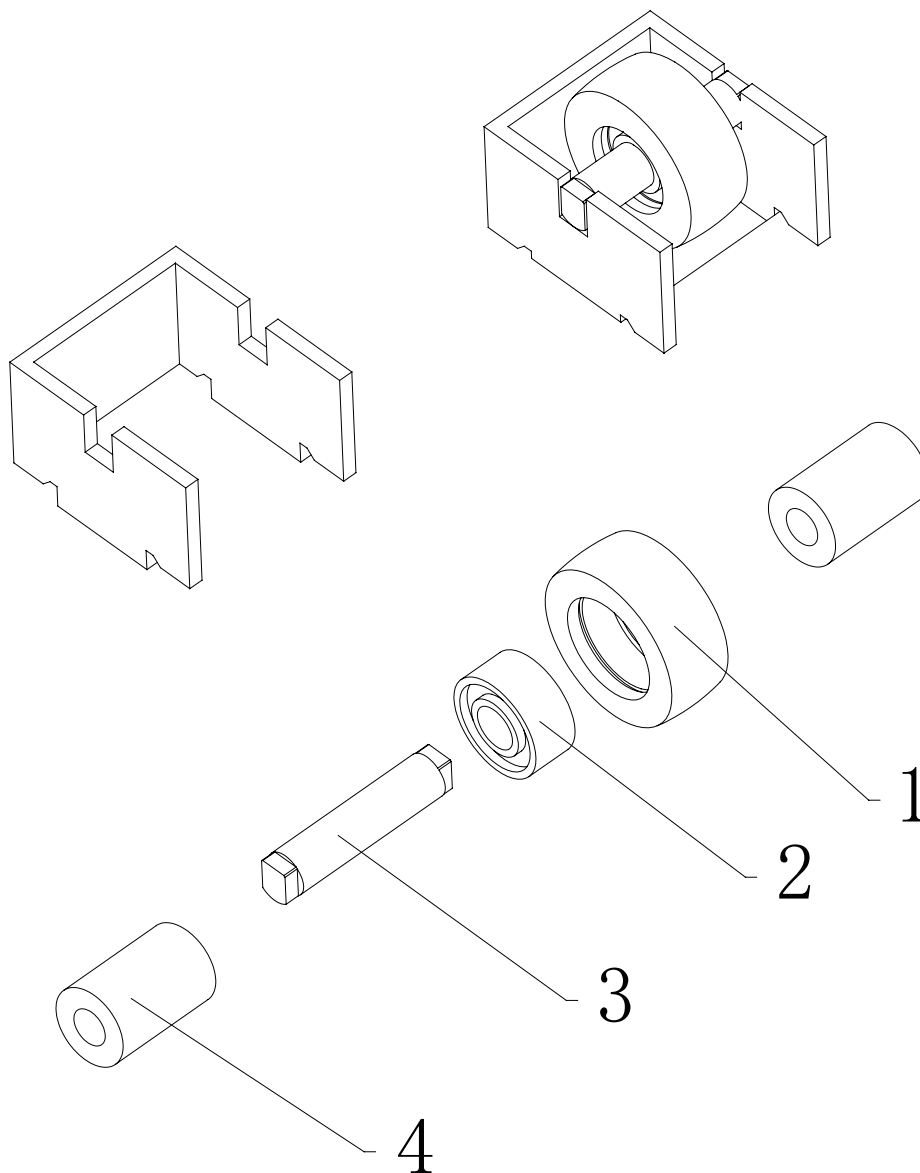
**8.2 > M-shaped base unit (W3 - 90°)**


| No. | Name             | Code                  | QTY | Remarks |
|-----|------------------|-----------------------|-----|---------|
| 1   | Cover plate 2    | FGB79-000000600.001.9 | 1   |         |
| 2   | Turntable motor  | YS7134B14/ NMRV050    | 1   | 370W    |
| 3   | Motor base plate | FGB79-005140000.000.9 | 1   |         |
| 4   | Motor shaft      | FGB79-005190000.100.9 | 1   |         |
| 5   | Main chain wheel | FGB79-005100000.000.9 | 1   |         |
| 6   | Chain            | 10A - 226 sections    | 1   |         |

| No. | Name                              | Code                    | QTY | Remarks |
|-----|-----------------------------------|-------------------------|-----|---------|
| 7   | Bearing                           | 6211                    | 1   |         |
| 8   | Main shaft                        | FGB79-005050000.200.9   | 1   |         |
| 9   | Bearing seat                      | FGB79-005000300.000.9   | 1   |         |
| 10  | M-shaped turntable base           | FGB79-000000000.000.9   | 1   |         |
| 11  | Counter travel switch             | TZ-918                  | 2   |         |
| 12  | Bearing                           | 6203                    | 2   |         |
| 13  | Main roller                       | FGB79-005150000.200.9   | 2   |         |
| 14  | Bearing                           | 6205                    | 2   |         |
| 15  | Main roller inner chain wheel     | FGB79-005130000.000.9   | 2   |         |
| 16  | Gasket                            |                         | 2   |         |
| 17  | Roller compression block          | FGB79-005180000.000.9   | 2   |         |
| 18  | Spring                            | FGB79-005200000.000.9   | 2   |         |
| 19  | Spring check ring                 |                         | 2   |         |
| 20  | Muffler pad                       | FGB79-005820000.000.0   | 2   |         |
| 21  | Adjusting screw rod               | M10                     | 2   |         |
| 22  | Depression bar 2                  | FGB79-005950000.000.9   | 2   |         |
| 23  | Fastening bolt                    | FGB79-005810000.000.9   | 2   |         |
| 24  | Roller tensioning bracket         | FGB79-005020000.001.9   | 2   |         |
| 25  | Main roller chain baffle plate    | FGB79-005390000.000.9   | 1   |         |
| 26  | Central fixed support cover plate | FGB79-005170000.000.9   | 1   |         |
| 27  | Central chain wheel               | FGB79-005120000.000.9   | 3   |         |
| 28  | Bearing                           | 6205                    | 3   |         |
| 29  | M-shaped turntable base           | FGD41-000000000.000.9   | 1   |         |
| 30  | Roller assembly                   | as shown in the diagram |     |         |

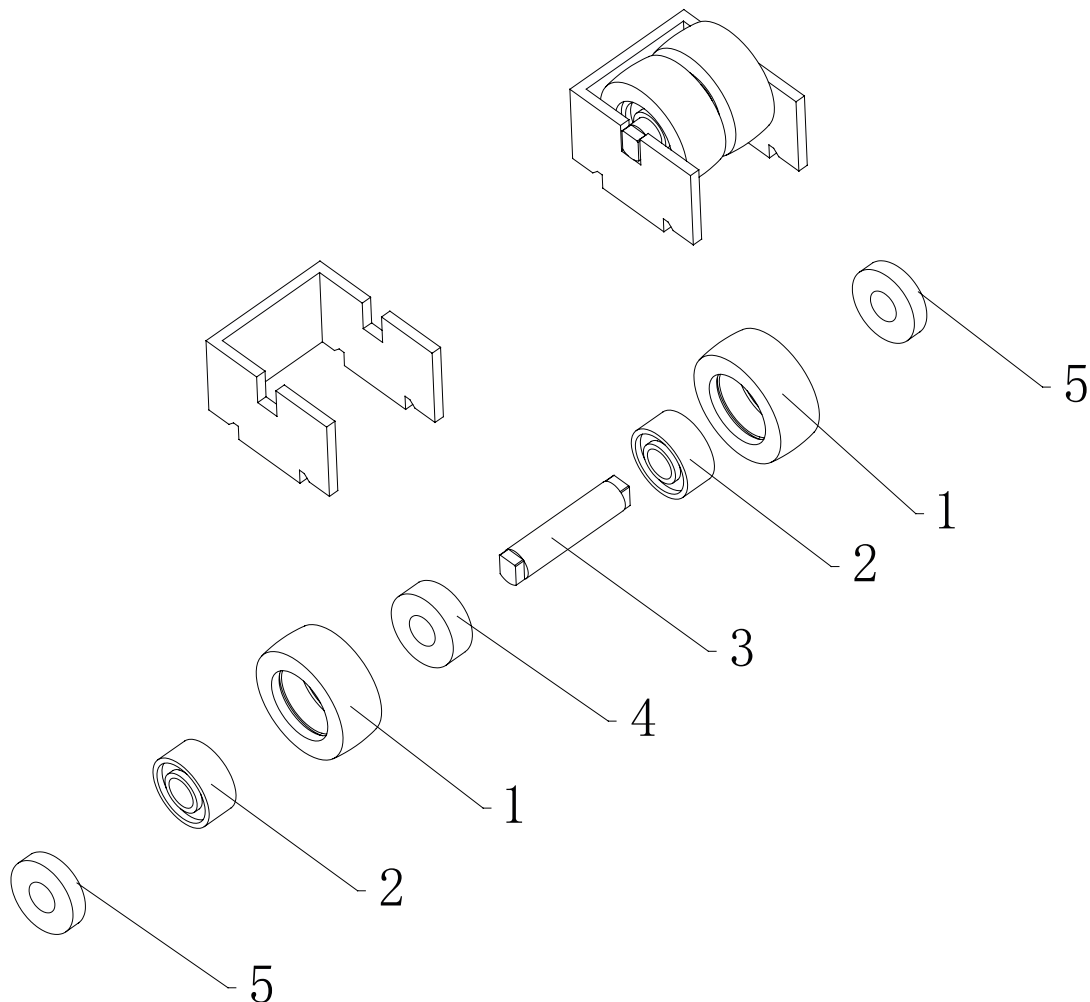


### 8.3 ► Roller assembly 1



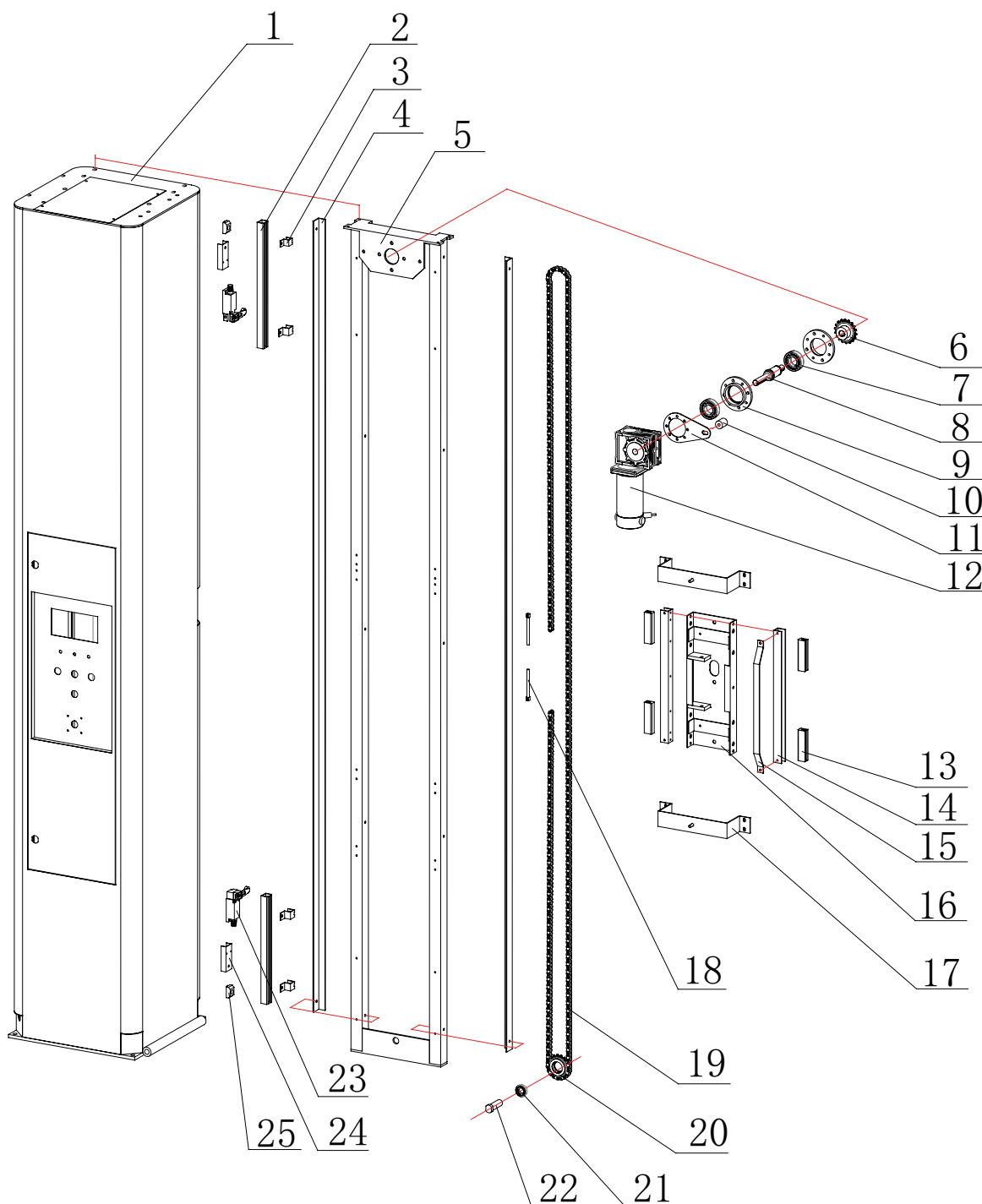
| No. | Name         | Code                         | QTY | Remarks |
|-----|--------------|------------------------------|-----|---------|
| 1   | Roller       | FGB50-000130000.000.9        | 1   |         |
| 2   | Bearing      | 6202                         | 1   |         |
| 3   | Roller shaft | FGB50-000140000.000.9        | 1   |         |
| 4   | Spacer bush  | FGB50-000150000.000.9 L=23mm | 2   |         |

## 8.4 > Roller assembly 2



| No. | Name         | Code                         | QTY | Remarks |
|-----|--------------|------------------------------|-----|---------|
| 1   | Roller       | FG50-000130000.000.9         | 2   |         |
| 2   | Bearing      | 6202                         | 2   |         |
| 3   | Roller shaft | FG50-000140000.000.9         | 1   |         |
| 4   | Spacer bush  | FG50-000150000.000.9 L=16mm  | 1   |         |
| 5   | Spacer bush  | FG50-000150000.000.9 L=9.5mm | 2   |         |

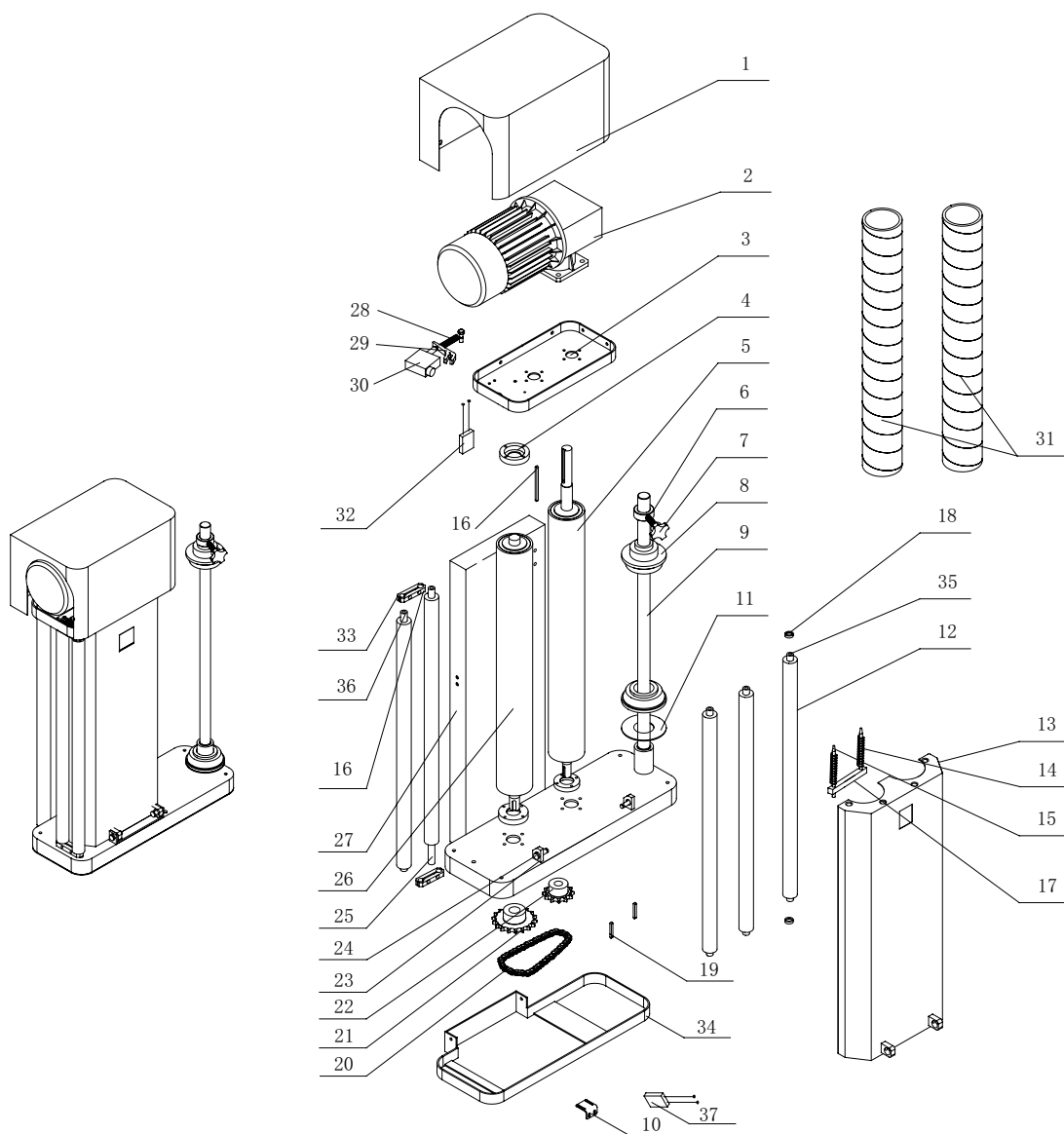
### 8.5 > Upright post unit (round corner - single chain)



#### NOTE

The exploded view of the column is for illustrative purposes. Some parts may have changed.

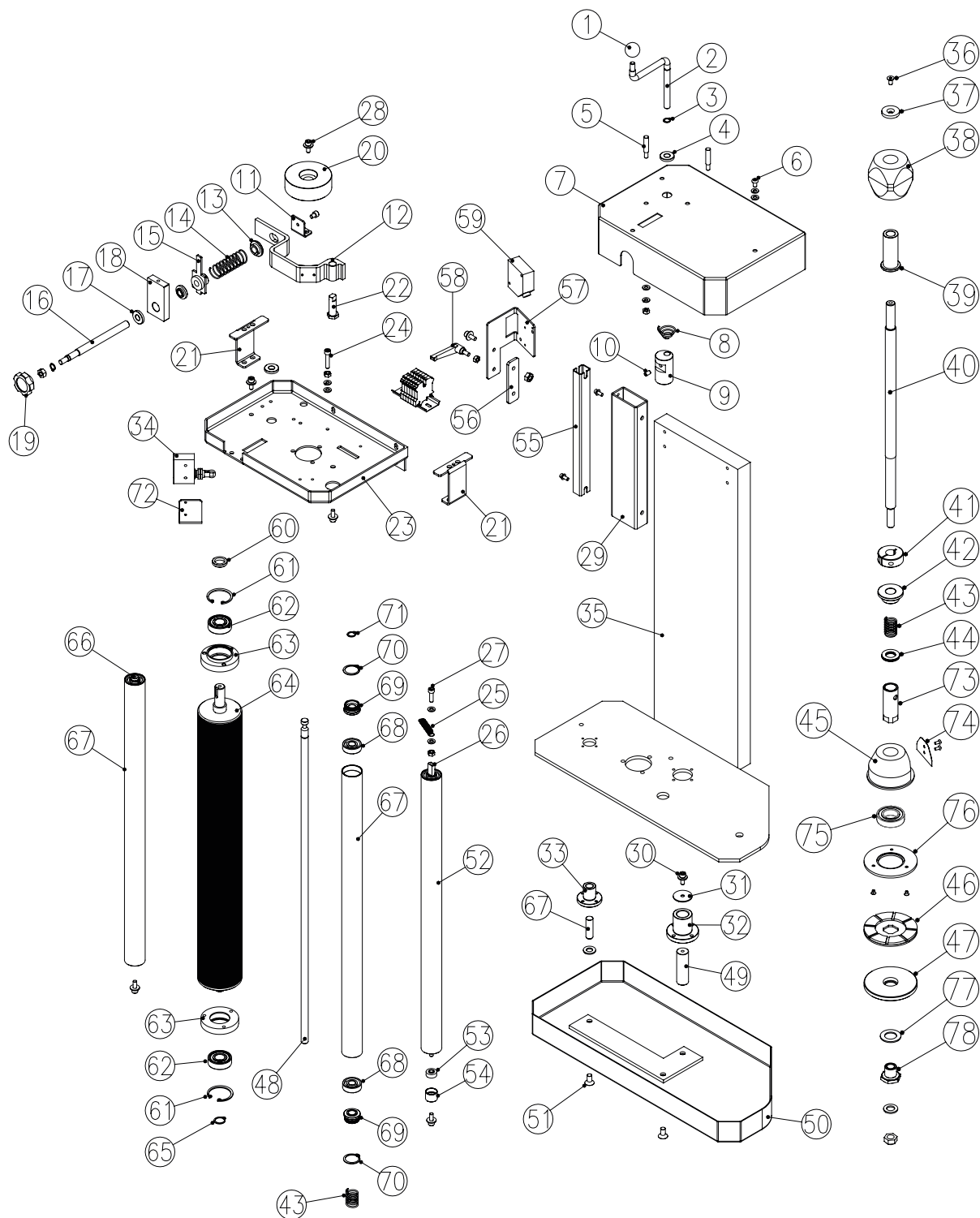
| No. | Name                                 | Code                                                 | QTY | Remarks |
|-----|--------------------------------------|------------------------------------------------------|-----|---------|
| 1   | Upright post                         | FGC28-0000000000.000.9                               | 1   |         |
| 2   | Travel switch sliding groove         | FGC20-010730000.000.3                                | 2   |         |
| 3   | Lifting trunking support frame       | FGC20-000730000.000.9                                | 4   |         |
| 4   | Aluminum alloy slideway              | FGC20-000570000.010.3                                | 2   |         |
| 5   | Lifting mechanism mounting rack      | FGC20-000550000.011.9                                | 1   |         |
| 6   | Motor chain wheel                    | FGC20-000600000.000.9                                | 1   |         |
| 7   | Bearing                              | 6206                                                 | 2   |         |
| 8   | Motor shaft                          | FGC20-006200000.000.9                                | 1   |         |
| 9   | Bearing seat                         | FGC20-007020000.001.9                                | 2   |         |
| 10  | Main motor plate weldment            | FGB50-000050200.000.9                                | 1   |         |
| 11  | Torque arm                           | FGC28-005160000.000.9                                | 1   |         |
| 12  | Lifting motor                        | YS6334 B14 with reducer<br>NMRV040/60 63 B14/ i=1:60 | 1   | 250W    |
| 13  | Plastic slider                       | FGC20-010680000.000.0                                | 4   |         |
| 14  | Slider frame                         | FGC17-005140000.000.9                                | 2   |         |
| 15  | Lifting touch block                  | FGC20-005150000.000.9                                | 1   |         |
| 16  | Single-chain lifting frame           | FGC20-000660000.001.9                                | 1   |         |
| 17  | Electrical base plate mounting plate | FGC28-005130000.003.9                                | 2   |         |
| 18  | Adjusting screw rod                  | FGC20-000650000.000.9                                | 2   |         |
| 19  | Chain                                | 08B                                                  | 1   |         |
| 20  | Driven chain wheel                   | FGC20-000610000.000.9                                | 1   |         |
| 21  | Bearing                              | 6904                                                 | 1   |         |
| 22  | Driven chain wheel shaft             | FGC20-005120000.000.9                                | 1   |         |
| 23  | Limit switch                         | D4V-8108SZ-N                                         | 2   | OMRON   |
| 24  | Lifting travel switch plate          | FGC20-000720000.000.9                                | 2   |         |
| 25  | Lifting travel limit block           | FGC20-000740000.000.9                                | 2   |         |

**8.6 > Unità carrello (modello con prestiro motorizzato)**


| No. | Name                    | Code                                                   | QTY | Remarks      |
|-----|-------------------------|--------------------------------------------------------|-----|--------------|
| 1   | Pre-stretch cover       | FGA50-001230000.000.9                                  | 1   |              |
| 2   | Pre-stretch motor       | YS6334 B14 with a reducer<br>NMRV040/20 63 B14/ i=1:20 | 1   | 250W         |
| 3   | Pre-stretch upper cover | FGA50-001110000.000.9                                  | 1   |              |
| 4   | Bearing seat            | FGA50-001320000.000.9                                  | 3   | 6904 bearing |
| 5   | Pre-stretch roller      | FGA50-001140000.000.9                                  | 1   |              |
| 6   | Straining ring          | FGA50-001380000.000.9                                  | 1   |              |
| 7   | Fastening screw         | M10                                                    | 1   |              |

| No. | Name                            | Code                   | QTY | Remarks |
|-----|---------------------------------|------------------------|-----|---------|
| 8   | Film positioning plate          | FGA50-001350000.000.6  | 2   |         |
| 9   | Film rod                        | FGA50-001340000.000.1  | 1   |         |
| 10  | Micro switch frame              | FGA52-001800100.000.9  | 1   |         |
| 11  | Positioning plate support       | FGA50-005260000.000.9  | 1   |         |
| 12  | Transition roller               | FGA50-001150000.000.3  | 5   |         |
| 13  | Transition roller base          | FGA50-001120000.001.9  | 1   |         |
| 14  | Compressed spring               | FGA50-001310000.000.9  | 2   |         |
| 15  | Locating pin                    | FGA50-001260000.000.9  | 2   |         |
| 16  | Key 1                           | 6mm×6mm×60mm           | 1   |         |
| 17  | Cross-bar                       | FGA50-001240000.000.9  | 1   |         |
| 18  | Bearing                         | 6901                   | 10  |         |
| 19  | Key 3                           | 5mm×5mm×14mm           | 2   |         |
| 20  | Chain                           | 06B                    | 1   |         |
| 21  | Pre-stretch chain wheel         | FGA50-001440000.000.9  | 1   |         |
| 22  | Main chain wheel                | FGA50-001430000.000.9  | 1   |         |
| 23  | Lower hinge                     | FGA50-001280000.000.9  | 1   |         |
| 24  | Hinge pin                       | FGA50-001290000.000.9  | 2   |         |
| 25  | Swing support shaft             | FGA50-001180000.000.9  | 1   |         |
| 26  | Main roller                     | FGA50-001130000.000.9  | 1   |         |
| 27  | Lifting unit                    | FGA50-001100000.000.9  | 1   |         |
| 28  | Tension spring                  | FGA50-001300000.000.9  | 1   |         |
| 29  | Micro switch touch block 1      | FGA50-001210000.000.9  | 1   |         |
| 30  | Micro switch                    | Z-15GQ22-B             | 1   | OMRON   |
| 31  | Rough surface belt              | 40mm×65mm×3300mm       | 2   |         |
| 32  | Photoelectric switch            | RLK31-8-2500-1R/31/115 | 1   | P+F     |
| 33  | Pre-stretch connecting block 2  | FGA50-001200000.000.1  | 2   |         |
| 34  | Pre-stretch protection frame    | FGA50-001400000.000.9  | 1   |         |
| 35  | Transition roller shaft (short) | FGA50-001160000.000.9  | 3   |         |
| 36  | Swing shaft (short)             | FGA50-001420000.000.9  | 1   |         |
| 37  | Micro switch                    | MQS-216                | 1   |         |

## 8.7 > Carriage unit (mechanical tension model)



### NOTE

The exploded view of the column is for illustrative purposes. Some parts may have changed.

| No. | Name                           | Code               | QTY | Remarks |
|-----|--------------------------------|--------------------|-----|---------|
| 1   | Handle - M8 teeth              | FGP38WG02500000000 | 1   |         |
| 2   | Handle                         | FGP61A007800000000 | 1   |         |
| 3   | C-shaped ring S-10             | 11301000000000000  | 1   |         |
| 4   | Ring                           | FGP18WG00200000006 | 2   |         |
| 5   | Spring locating pin            | FGP38A008100000000 | 2   |         |
| 6   | Screw M6×10L                   | 10240610000000000  | 2   |         |
| 7   | Cover                          | FGP61A000400000000 | 1   |         |
| 8   | Spring                         | FGP38WG02800000000 | 1   |         |
| 9   | Wheel                          | FGP61A007700000000 | 1   |         |
| 10  | Screw M6*10L                   | 10180610000000000  | 1   |         |
| 11  | Fixed plate                    | FGP38A005400000000 | 1   |         |
| 12  | Brake plate                    | FGP38A000500000000 | 1   |         |
| 13  | Block ring                     | FGP38A008300000000 | 1   |         |
| 14  | Stretch spring                 | FGP38WG02700000000 | 1   |         |
| 15  | Tension adjusting base         | FGP61A000600000000 | 1   |         |
| 16  | Tension adjusting screw        | FGP38A007500000000 | 1   |         |
| 17  | Ring                           | FGP18WG00200000006 | 2   |         |
| 18  | Fixed base of G gear screw     | FGP61A007600000000 | 1   |         |
| 19  | Handle                         | FGP61A007800000000 | 1   |         |
| 20  | Brake wheel                    | FGP38A007900000000 | 1   |         |
| 21  | Cover plate                    | FGP61A000400000000 | 2   |         |
| 22  | Brake shaft                    | FGP38A008000000000 | 1   |         |
| 23  | Upper base of lifting assembly | FGP61A000300000000 | 1   |         |
| 24  | Screw M5×45L                   | 10180545000000000  | 2   |         |
| 25  | Roller spring                  | FGP18WG00100000000 | 2   |         |
| 26  | Roller shaft                   | FGP38A006600000000 | 1   |         |
| 27  | Screw M6×20L                   | 10180620000000000  | 1   |         |
| 28  | Screw M6×12L                   | 10180612000000000  | 1   |         |
| 29  | Side frame                     | PJ35030B           | 1   |         |

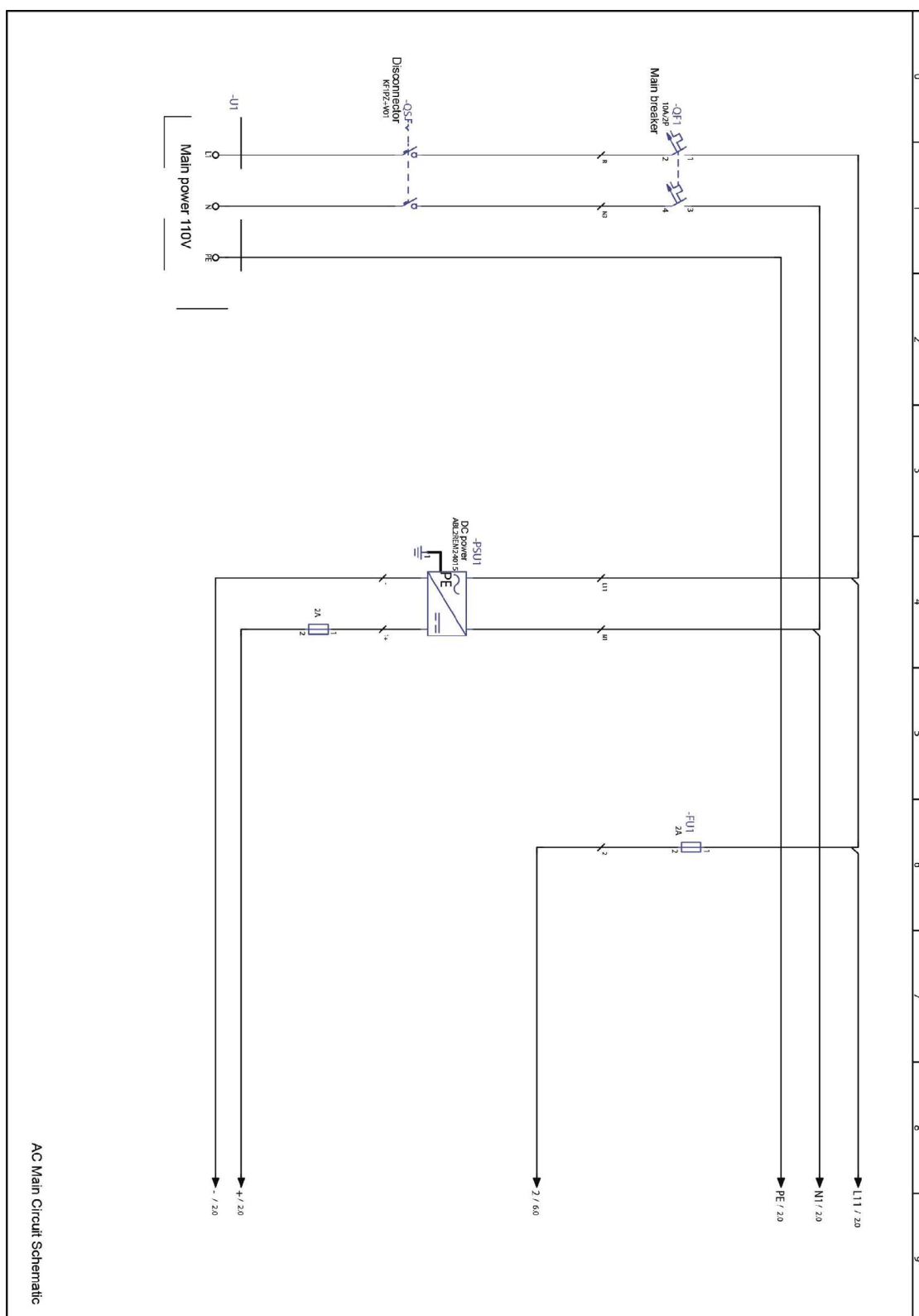


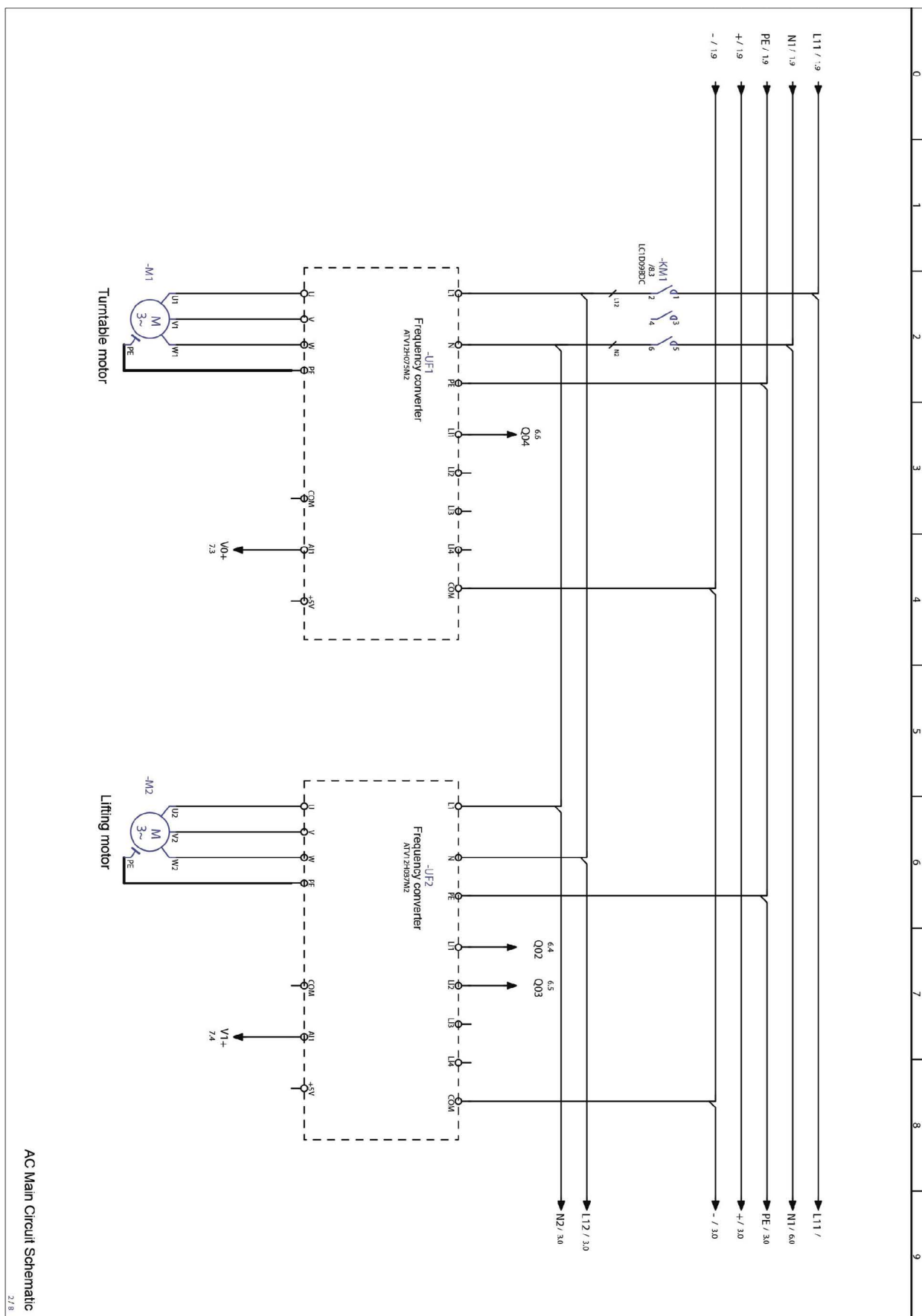
| No. | Name                                        | Code                | QTY | Remarks |
|-----|---------------------------------------------|---------------------|-----|---------|
| 30  | Screw M6×16L                                | 102506160000000000  | 1   |         |
| 34  | Limit switch Z-15GQ22                       | 7350TZ040000000000  | 1   |         |
| 35  | Lifting unit                                | FGP61A000000000000  | 1   |         |
| 36  | Screw M6*16L                                | 102506160000000000  | 1   |         |
| 37  | Protective device                           | FGP18A005000000000  | 1   |         |
| 38  | Upper fixed ring                            | FGP18WG002000000006 | 1   |         |
| 39  | Ring                                        | FGP18WG002000000006 | 1   |         |
| 40  | Film base shaft                             | FGP18A000700000010  | 1   |         |
| 41  | Adjusting ring                              | FGP18A001400000000  | 1   |         |
| 42  | Lower fixed ring                            | FGP18A001300000004  | 1   |         |
| 43  | Spring                                      | FGP18WG001000000000 | 2   |         |
| 44  | Bearing NTB1730 (TPX)                       | 303617300000000000  | 1   |         |
| 45  | Film fixed base                             | FGP18A000900000016  | 1   |         |
| 46  | Film brake plate                            | FGP18A001200000000  | 1   |         |
| 47  | Friction base                               | FGR214002000000000  | 1   |         |
| 48  | Sensor idle shaft                           | FGP18A006200000000  | 1   |         |
| 49  | Pedal shaft                                 | FGP18A003400000000  | 1   |         |
| 50  | Safety pedal (P-308)                        | FGP18A000100000000  | 1   |         |
| 51  | Screw M8*20L                                | 101408200000000000  | 1   |         |
| 52  | Roller tube                                 | FGP18A006400000003  | 2   |         |
| 53  | Ball bearing                                | 303020120000000000  | 1   |         |
| 54  | General-use bearing seat                    | FGP18A002500000000  | 2   |         |
| 55  | Slot rail                                   | FGP18A003500000003  | 1   |         |
| 56  | Fixed piece                                 | FGP60A007100000000  | 1   |         |
| 57  | Photoelectric sensor base                   | FGP18A005700000000  | 1   |         |
| 58  | Handle 6×13                                 | FGP18WG012000000000 | 1   |         |
| 59  | Photoelectric sensor RLK31-8-2500-1R/31/115 | 73602M050000000000  | 1   |         |
| 60  | Insulation ring                             | FGP18A002800000000  | 1   |         |

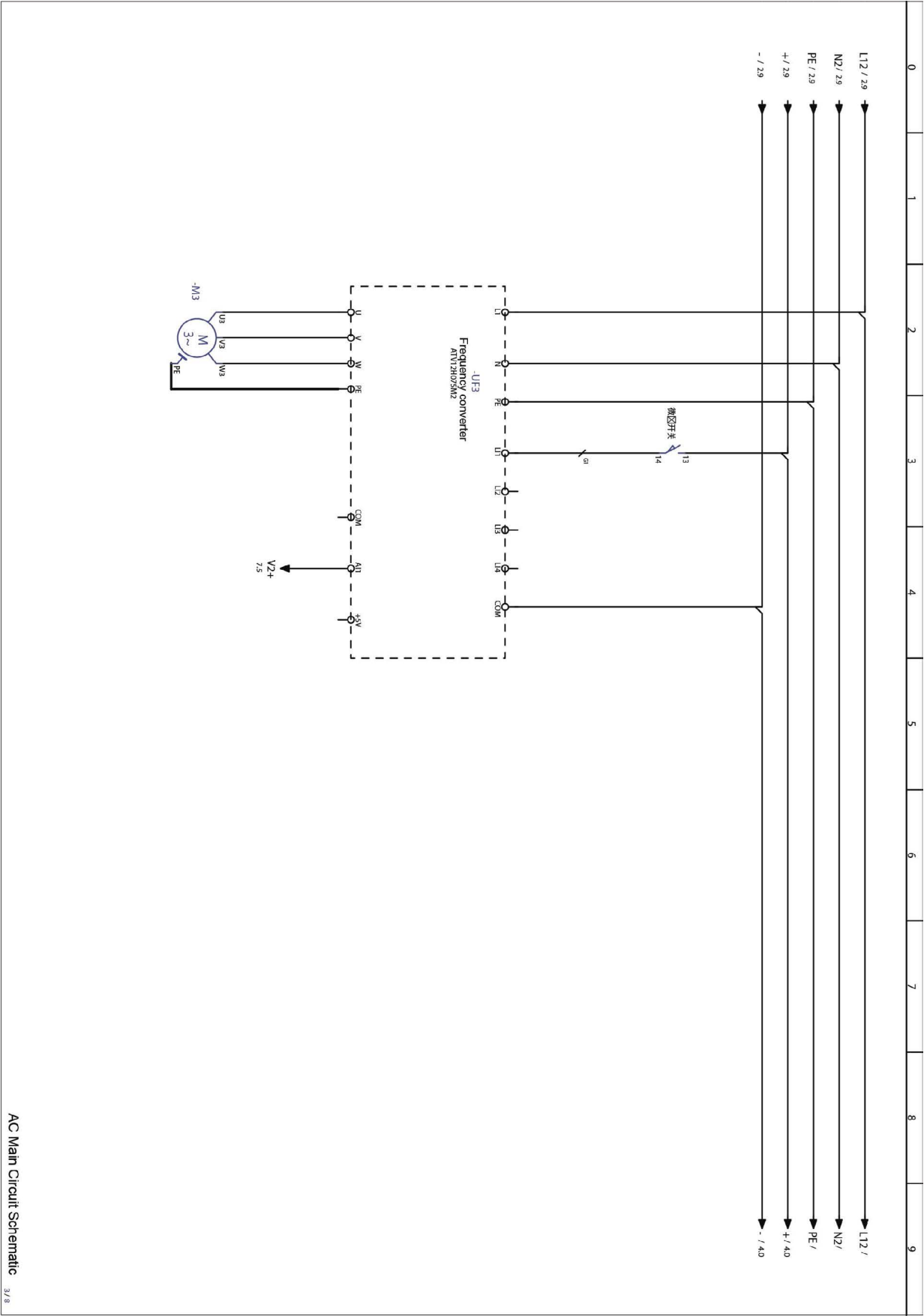
| No. | Name               | Code               | QTY | Remarks |
|-----|--------------------|--------------------|-----|---------|
| 61  | C-shaped ring R-42 | 113142000000000000 | 1   |         |
| 62  | Bearing 6203ZZ     | 303020300000000000 | 2   |         |
| 63  | Bearing seat       | FGP18A001500000000 | 2   |         |
| 64  | Pre-stretch roller | FGP38A001600000000 | 1   |         |
| 65  | C-shaped ring S-17 | 113017000000000000 | 1   |         |
| 66  | Roller shaft       | FGP38A006600000000 | 1   |         |
| 67  | Roller tube        | FGR214001600000010 | 1   |         |
| 68  | Bearing 6201ZZ     | 303020100000000000 | 6   |         |
| 69  | Nylon bush         | FGP38A008400000000 | 2   |         |
| 70  | C-shaped ring S-25 | 113025000000000000 | 2   |         |
| 71  | C-shaped ring S-12 | 113012000000000000 | 5   |         |
| 72  | Limit switch base  | 7350TZ040000000000 | 1   |         |

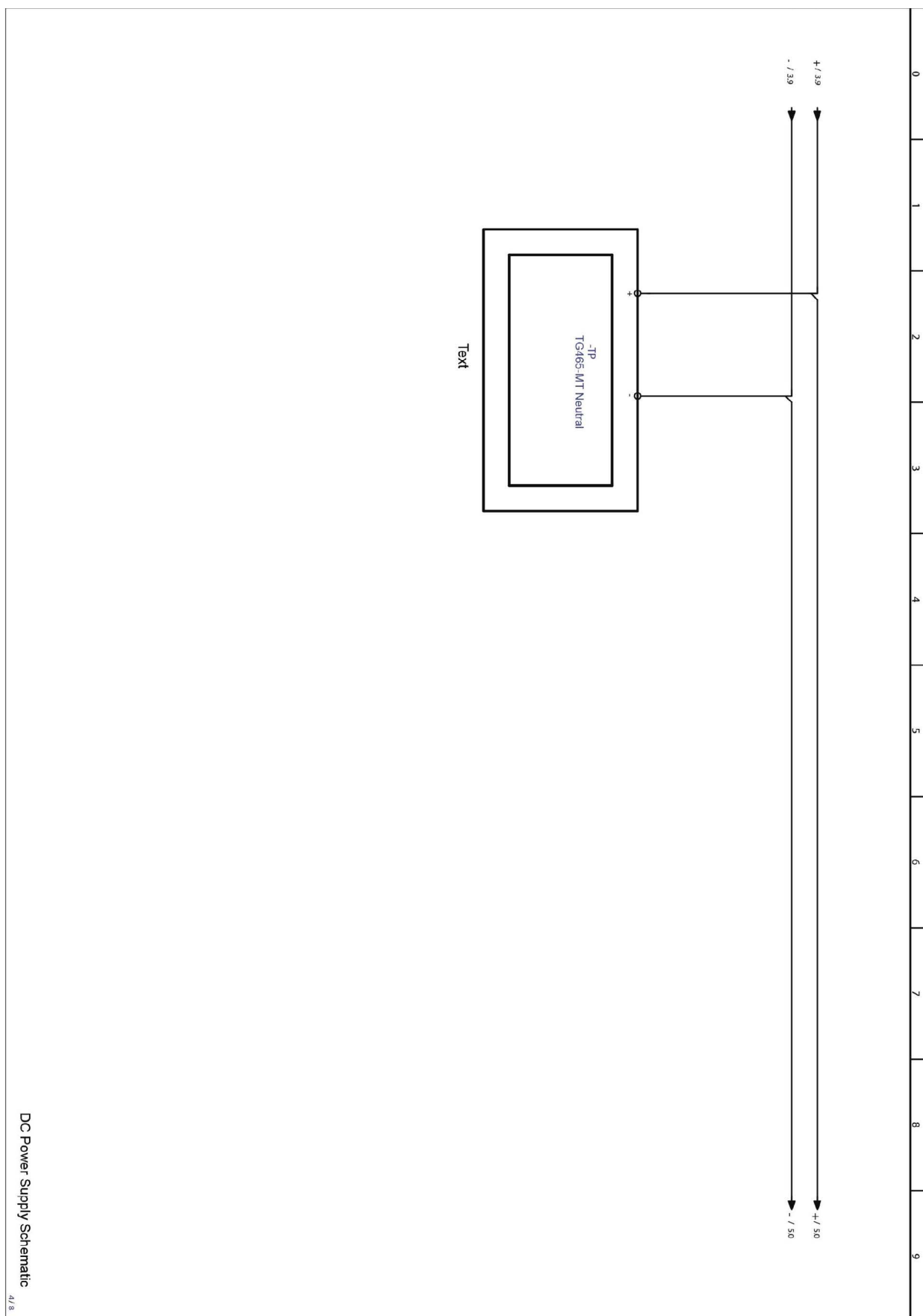
## 9. > WIRING DIAGRAMS AND DIAGRAMS

### 9.1 > Wiring diagrams Easy Wrap 2000 AW - BW



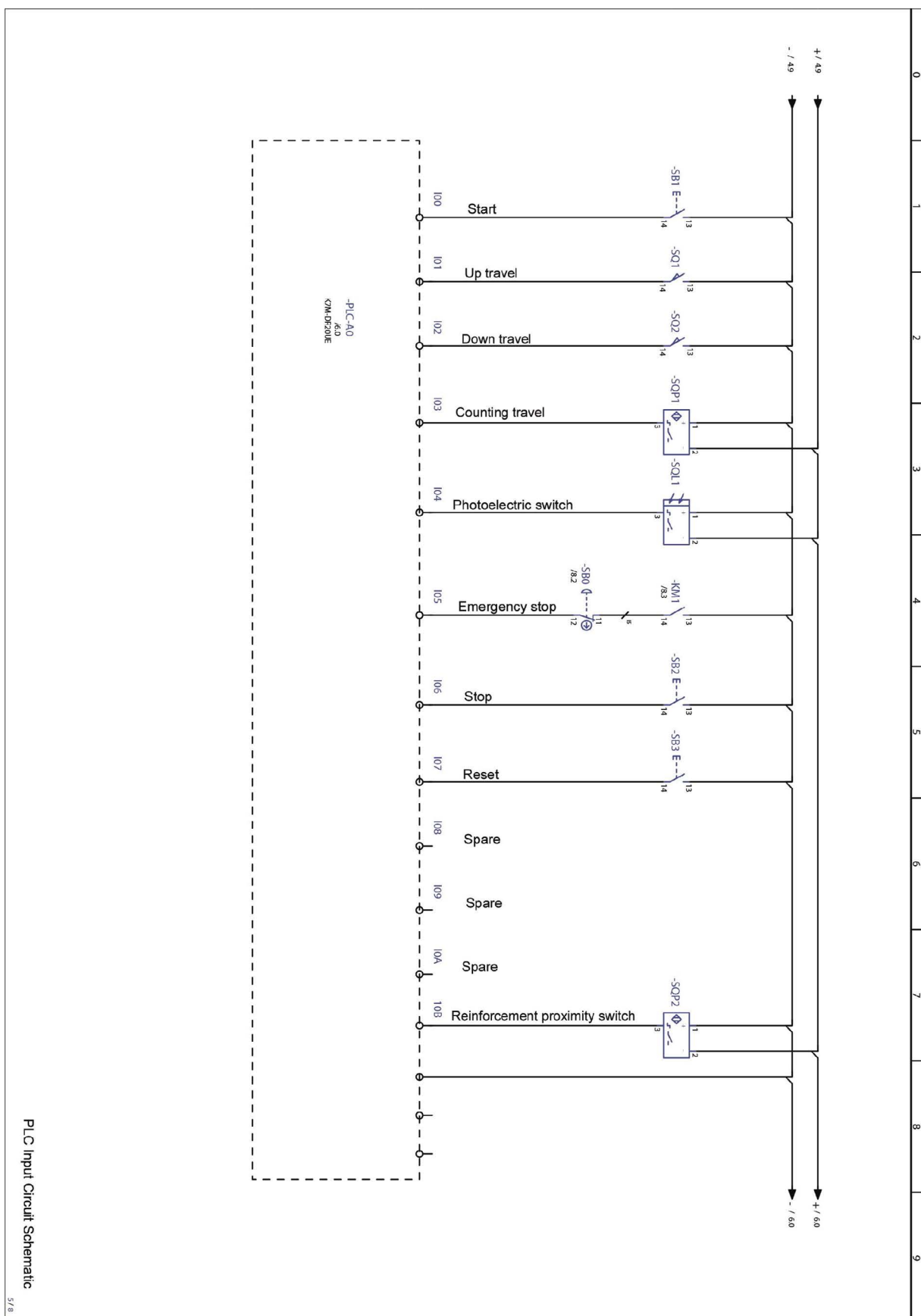


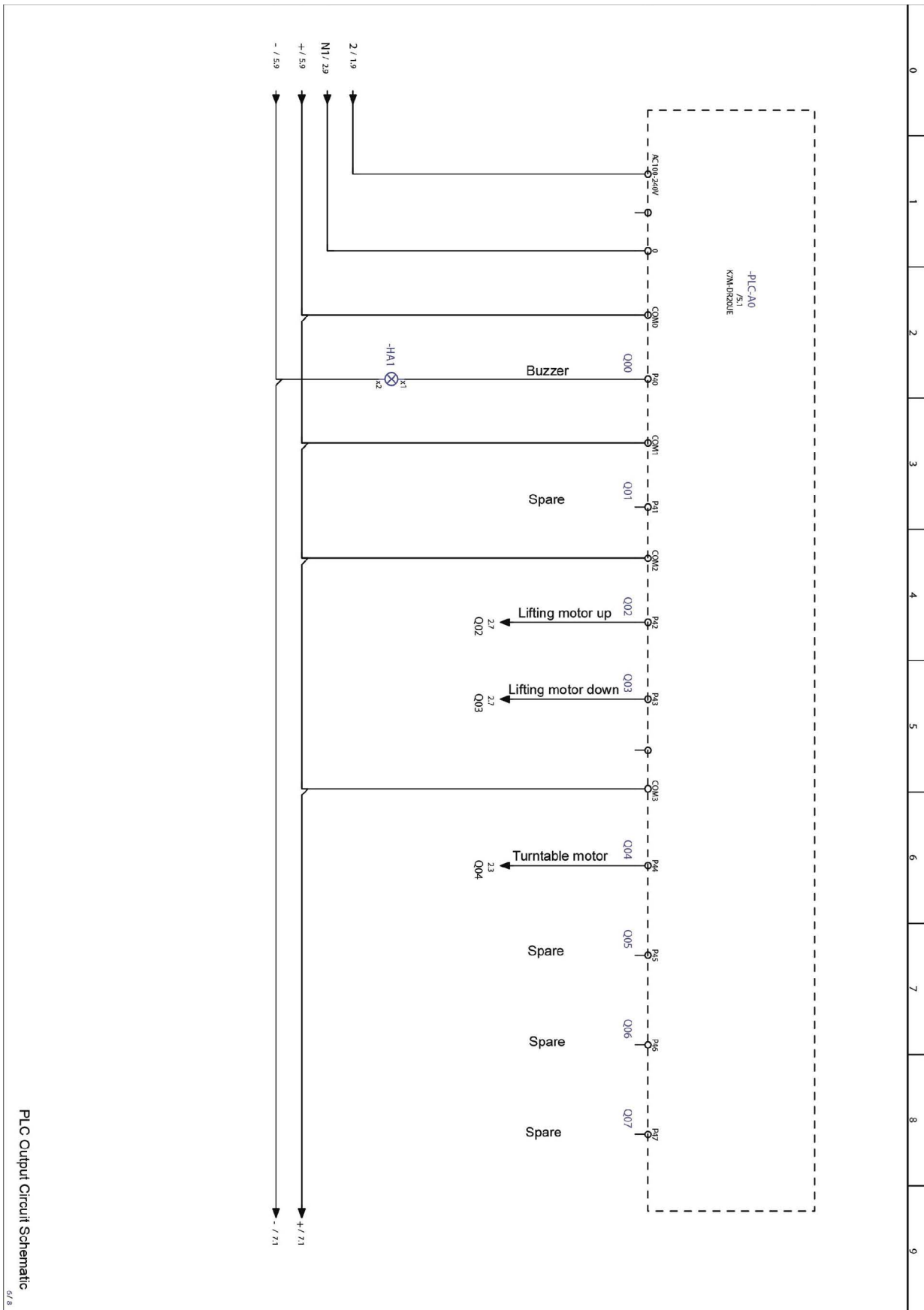




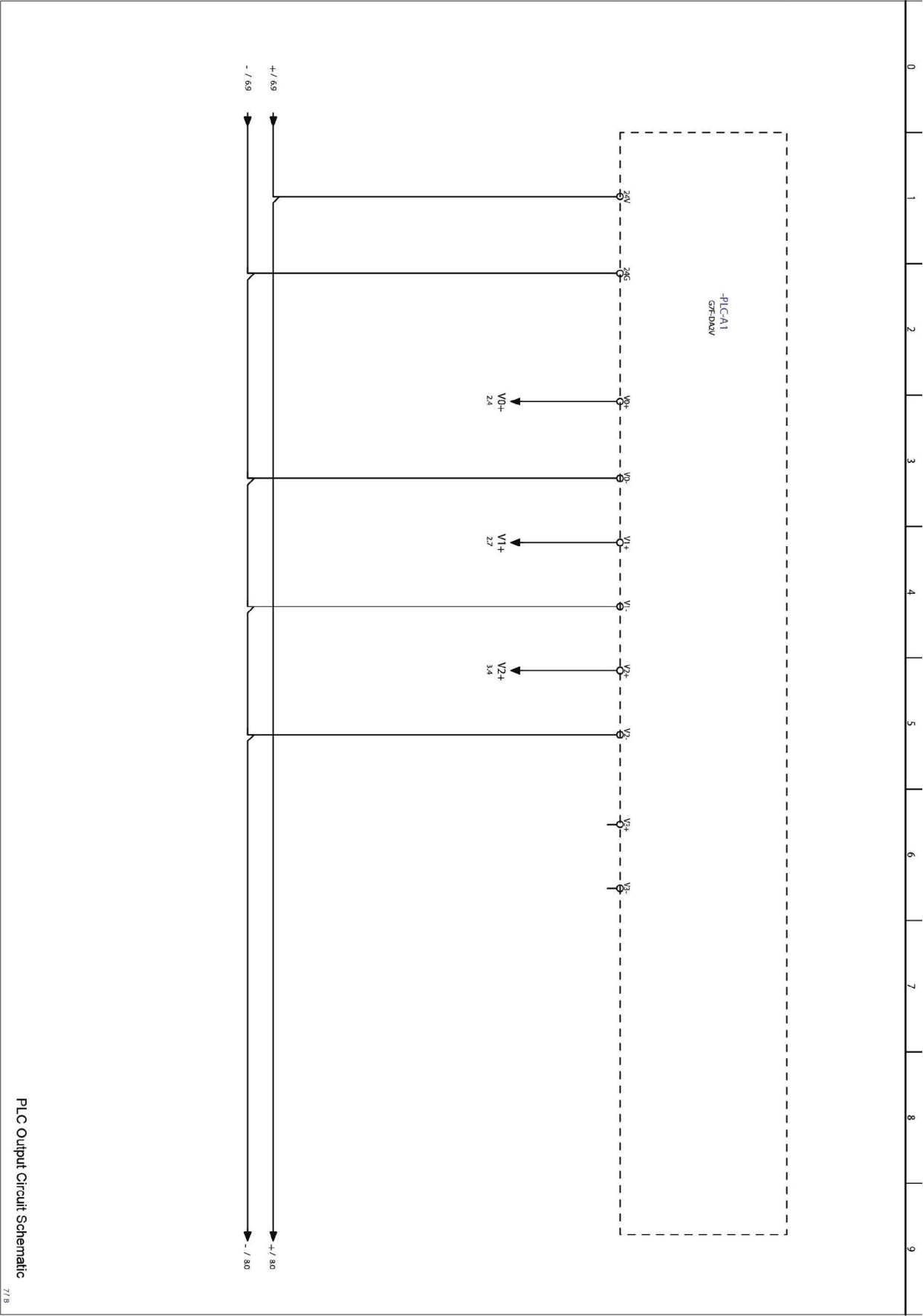
DC Power Supply Schematic

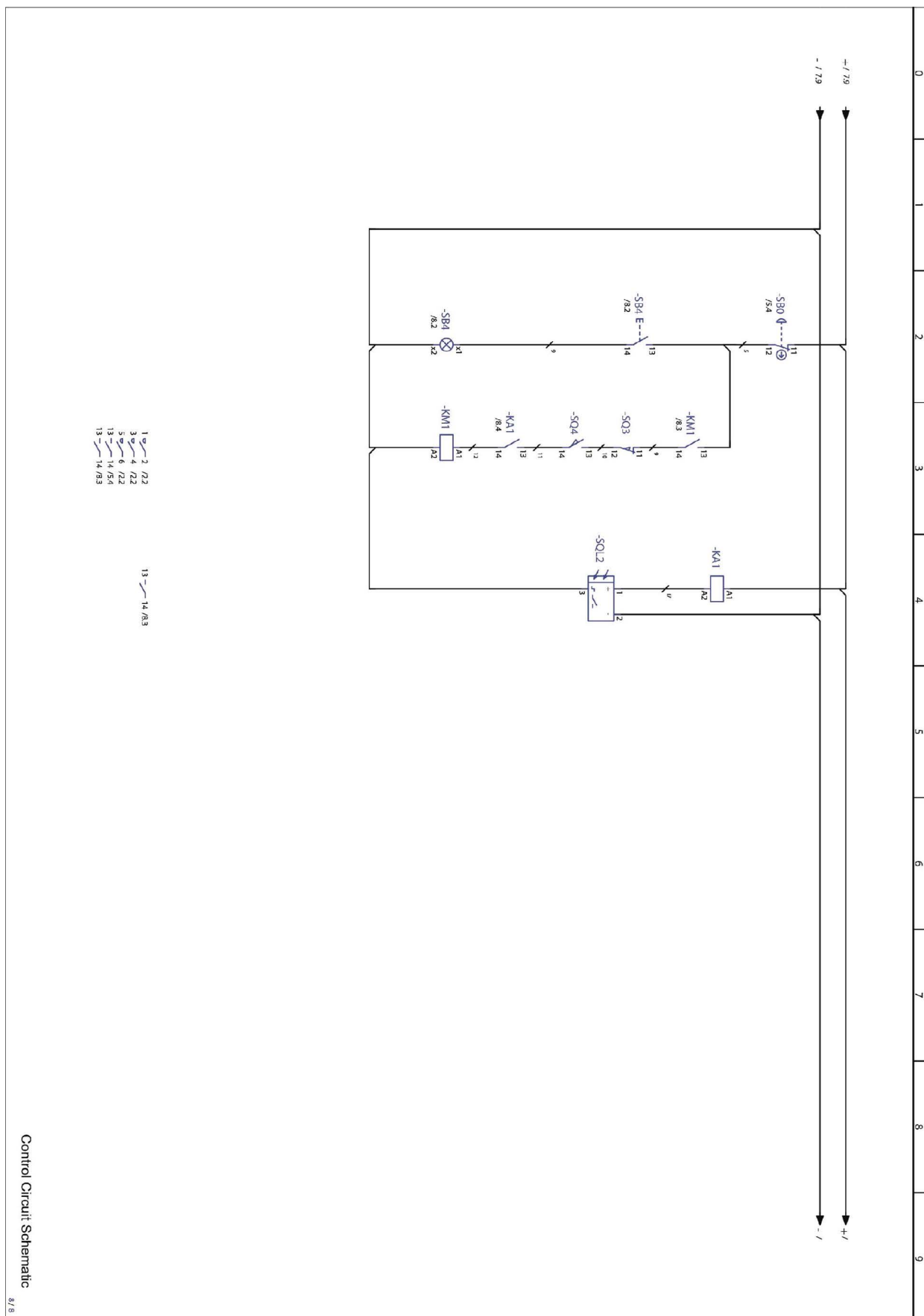
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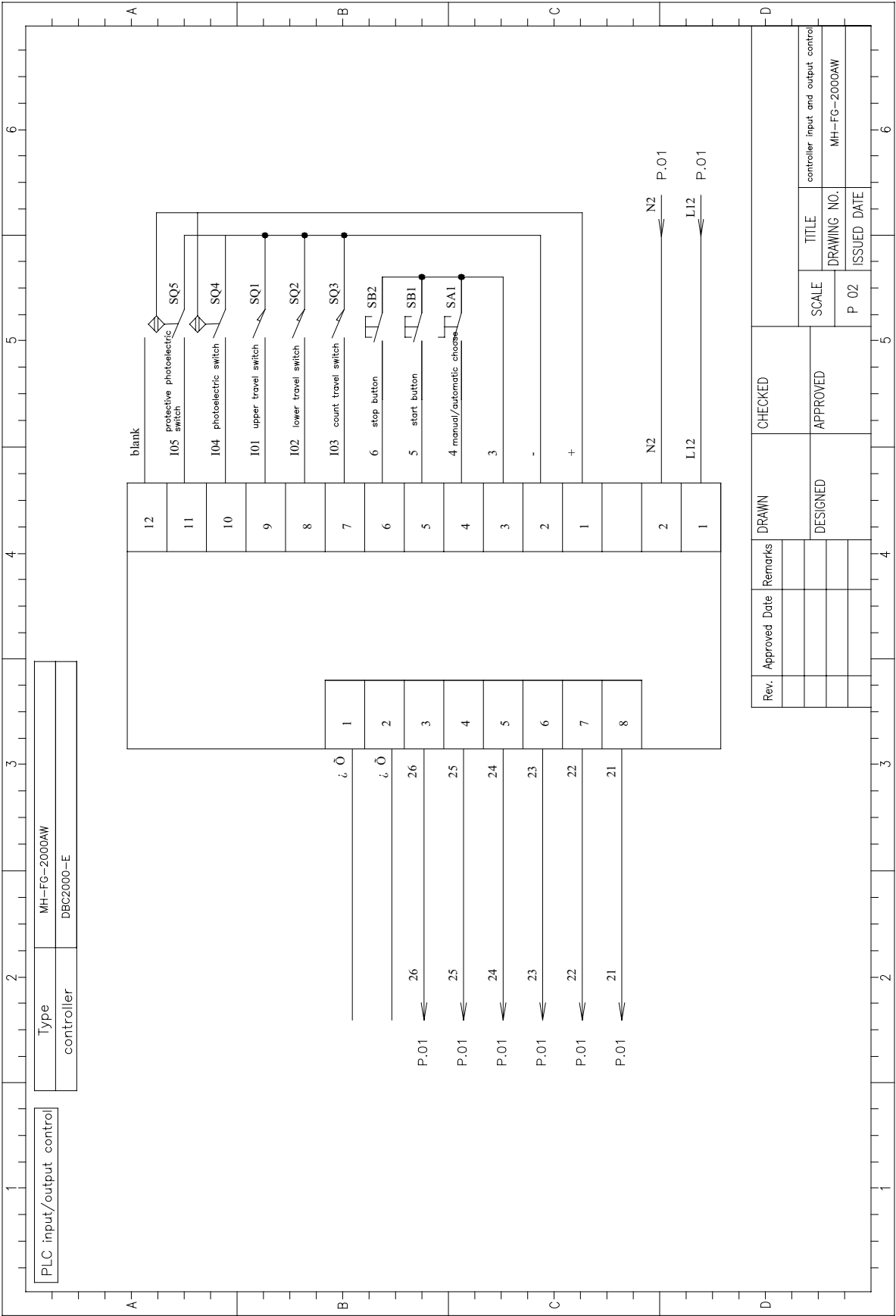


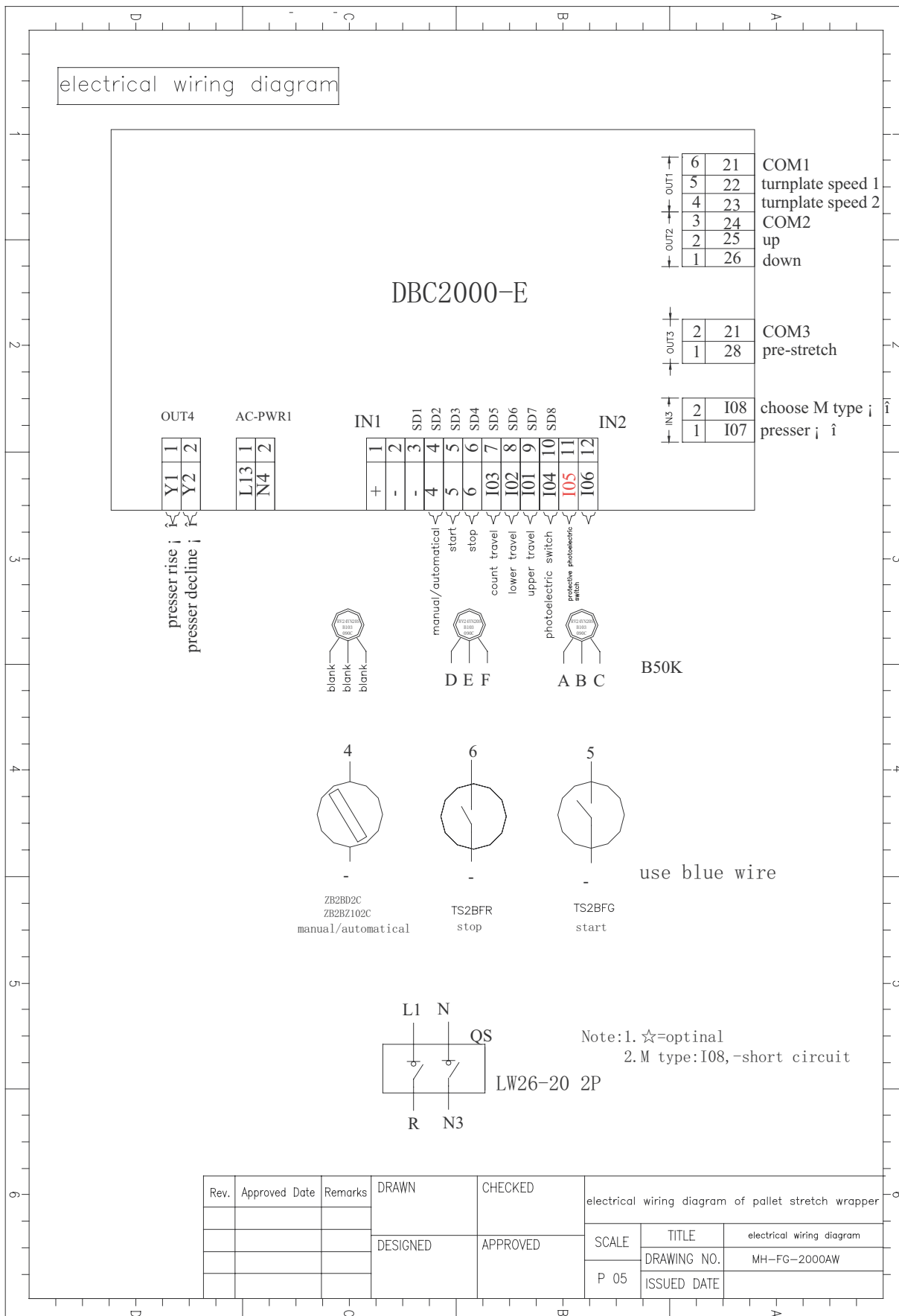




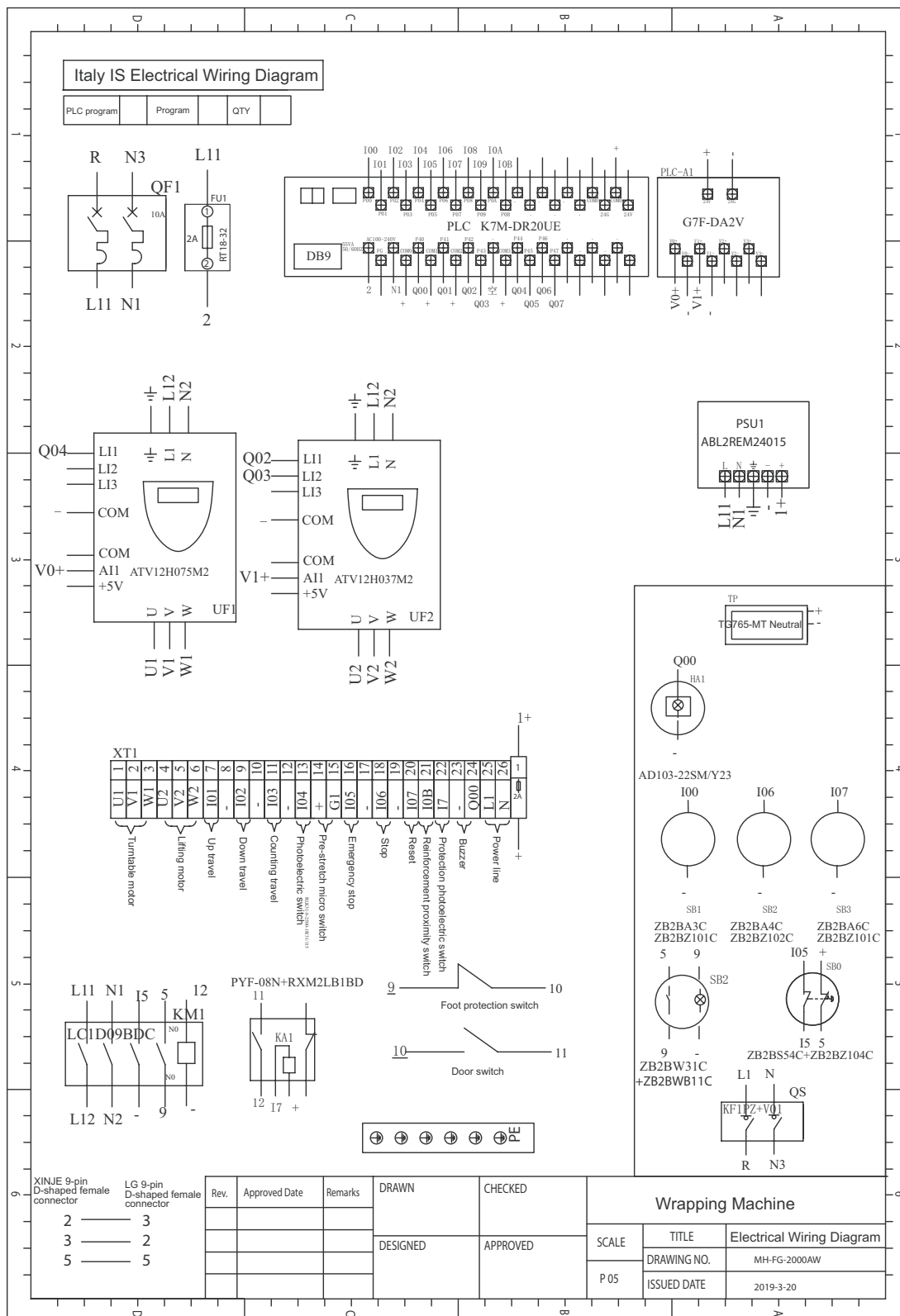




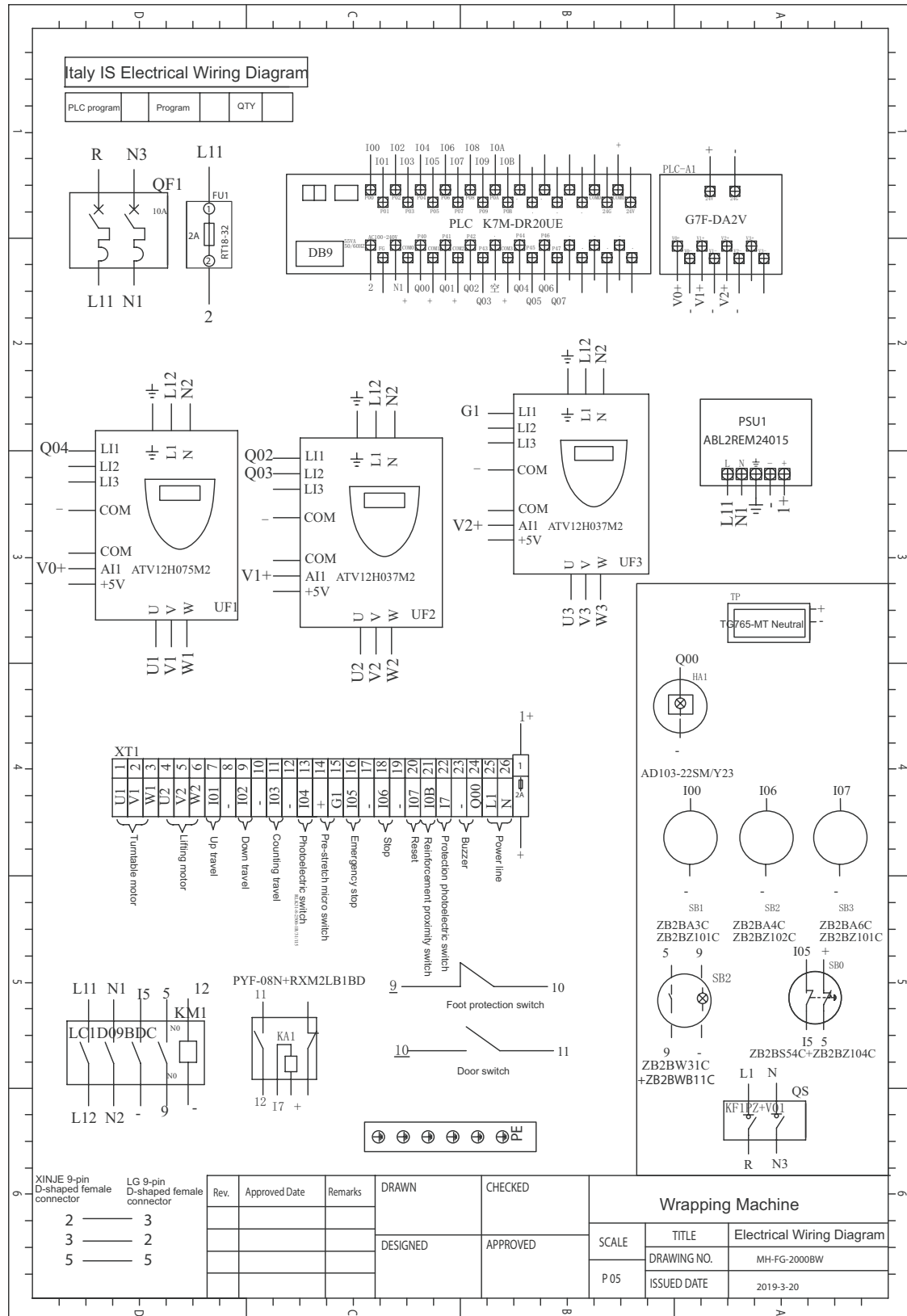




## 9.2 > Electrical diagram Easy Wrap 2000 AW



### 9.3 > Electrical diagram Easy Wrap 2000 BW



## 10. ➤ APPENDIX A LIST OF MAIN COMPONENTS

| No. | Name                                    | Model                  | Device Name      |
|-----|-----------------------------------------|------------------------|------------------|
| 1   | Breaker                                 | OSMC32N 2D10A          | Wrapping Machine |
| 2   | LG PLC                                  | K7M-DR20UE             |                  |
| 3   | Schneider frequency converter           | ATV12H075M2            |                  |
| 4   | Schneider frequency converter           | ATV12H037M2            |                  |
| 5   | Power switch                            | ABL2REM24015           |                  |
| 6   | AC contactor                            | LC1D09BDC              |                  |
| 7   | Intermediate relay                      | RXM2LB1BD              |                  |
| 8   | Touch screen                            | TG765-ET               |                  |
| 9   | Buzzer                                  | AD103-22SM/Y23         |                  |
| 10  | Safety reset button                     | ZB2BW31C               |                  |
| 11  | Start button                            | ZB2BA3C                |                  |
| 12  | Stop button                             | ZB2BA4C                |                  |
| 13  | Reset button                            | ZB2BA6C                |                  |
| 14  | Emergency stop button                   | B2BS54C+ZB2BZ105C      |                  |
| 15  | Disconnecter                            | KCF1PZ+V01             |                  |
| 16  | Micro switch                            | Z-15GQ-22-B            |                  |
| 17  | Proximity switch                        | NBN5-F7-E0             |                  |
| 18  | Travel switch                           | D4V-8108SZ-N           |                  |
| 19  | Diffuse reflection photoelectric switch | RLK31-8-2500-1R/31/115 |                  |
| 20  | M-type protection photoelectric switch  | BMS2M-MDT              |                  |



# SPARE PARTS REQUEST FORM

Company

Applicant

Contact Email

Telephone number

Machine type: Wrapping machine, strapping machine, etc.

Machine model. See CE label on the machine

Machine serial number

Year of production

| N. | Code | Description | Quantity |
|----|------|-------------|----------|
| 1  |      |             |          |
| 2  |      |             |          |
| 3  |      |             |          |
| 4  |      |             |          |
| 5  |      |             |          |
| 6  |      |             |          |
| 7  |      |             |          |
| 8  |      |             |          |
| 9  |      |             |          |
| 10 |      |             |          |
| 11 |      |             |          |
| 12 |      |             |          |
| 13 |      |             |          |
| 14 |      |             |          |
| 15 |      |             |          |

Please fill out the form correctly, scan it and send it to the email:

[info@imballaggiservice.com](mailto:info@imballaggiservice.com)

Date: .....

*Stamp and signature*



**It** Le indicazioni riportate non sono impegnative  
**En** The information given is not binding  
**Fr** Les indications fournies ne sont pas contraignantes  
**De** Die Angaben sind unverbindlich  
**Es** Las indicaciones presentadas no nos comprometen



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