

# ROASTER CENTODUE

USER AND SERVICE MANUAL



**PREFACE**

**SELMI S.r.l.** would like to thank you for purchasing our "ROASTER Centodue", roasting machine with fluidized bed.

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

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

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

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

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

This document is an integral part of the "ROASTER Centodue", roasting machine with fluidized bed as described in section 1.7.4 of annex I of directive 2006/42/CE.

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

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**EC DECLARATION OF CONFORMITY**



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

**"ROASTER Centodue", roasting machine with fluidized bed**

Serial number:

is compliant with all the provisions contained in the following directives: 2006/42/EC (machine directive), 2014/30/UE (electromagnetic compatibility), EC regulation 1935/2004 (contact with foodstuffs) and 2014/35/UE (low tension directive).

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

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

Year of construction:

The liable person

Date:



<b>1. General information</b>	<b>5</b>	<b>3. Moving and transportation section</b>	<b>20</b>
1.1. Structure of the manual	4	3.1. General norms	20
1.2. Messages Used	4	3.2. Packaging	20
1.3. Aim and contents	4	3.3. Transportation	21
1.4. Preservation of the manual	4	3.4. Removal of the packaging	21
1.5. External components	6	<b>4. Installation section</b>	<b>20</b>
1.6. Internal components	7	4.1. Positioning	21
1.7. Details of the manufacturer	12	4.2. Electrical connections	21
1.8. Identification plate of the machine	11	4.3. Air compressed connection	22
1.9. Identification plate of the CE marking	11	<b>5. Operation section</b>	<b>23</b>
1.10. Inteded use	11	5.1. Control panel	23
1.11. Operating environment	11	5.3. Alarms	28
1.12. Noise level	11	<b>6. Maintenance section</b>	<b>29</b>
1.13. Technical characteristics	13	6.1. General information	29
1.14. Dimensions	13	6.2. General safety practice	29
1.15. Storage	13	Cleaning and maintenance	31
1.16. Disposal	13	<b>7. Technical diagrams section</b>	<b>33</b>
1.17. Warranty	13	7.1. Electrical circuit diagram	33
1.18. person qualified to operate	14	<b>8. Spare part section</b>	<b>41</b>
<b>2. Safety section</b>	<b>15</b>		
2.1. Safety information	15		
2.2. Safety limitations	15		
2.3. Safety symbols and plaques	16		
2.4. Safety and protection devices	16		
2.5. Client's safety measures	17		
2.6. Personal protection equipment	17		
2.7. Residual risks	18		
2.8. Applied Directives	19		
2.9. Harmonized technical norms	19		

# 1. General information

## 1.1. Structure of the manual

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

## 1.2. Messages used

### Attention

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

### Warning

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

### Environment

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

### Note

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

## 1.3. Aim and contents

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

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

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

### Attention

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

### Warning

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

## 1.4. Preservation of the manual

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

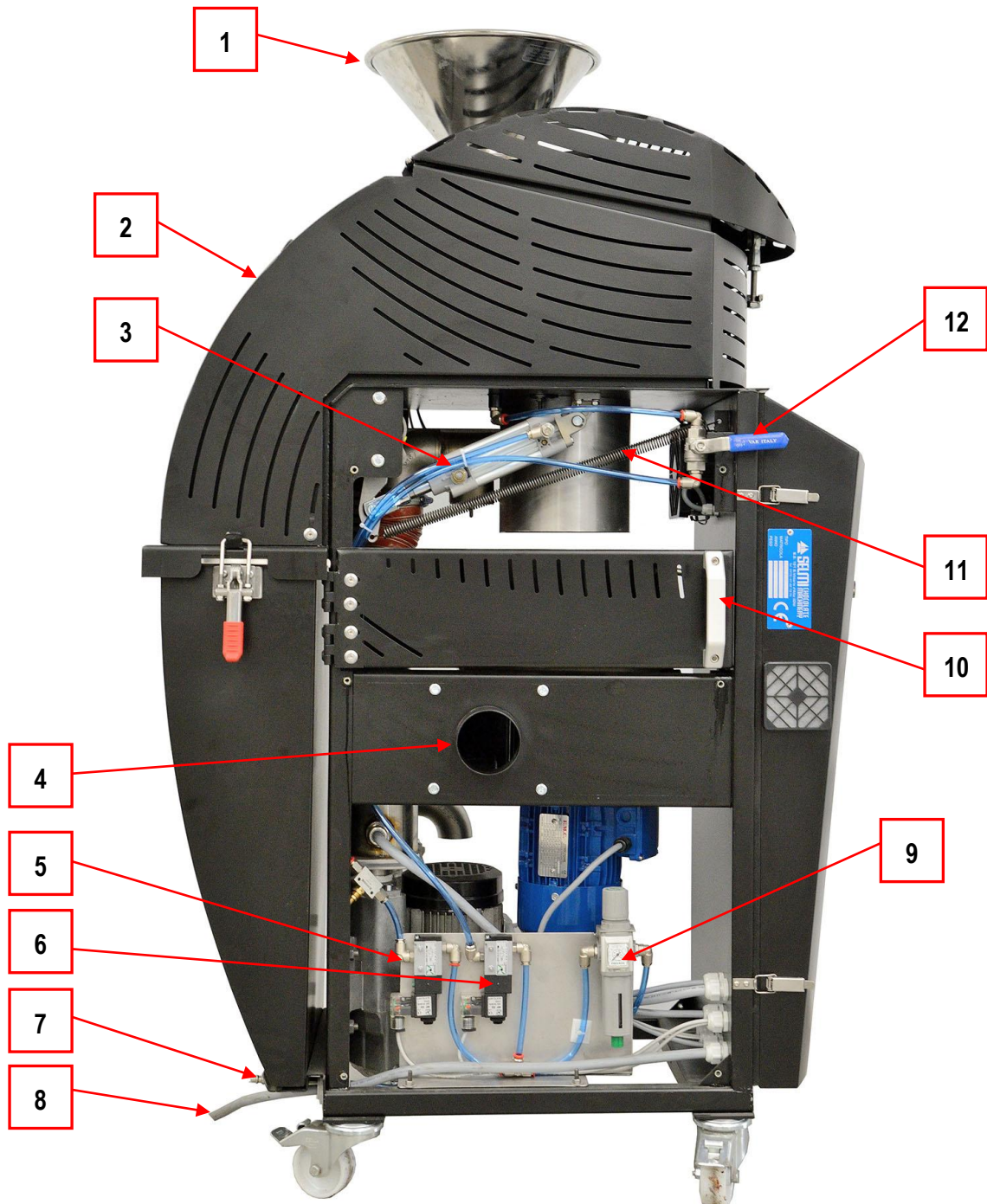
- store the manual in areas protected from humidity and heat, so as not to jeopardise the quality or legibility of any part of the publication;
- keep the manual in an easily accessible place known to the machine operators;
- avoid handling the manual with dirty or greasy hands;
- if you think it is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

## 1.5. External components



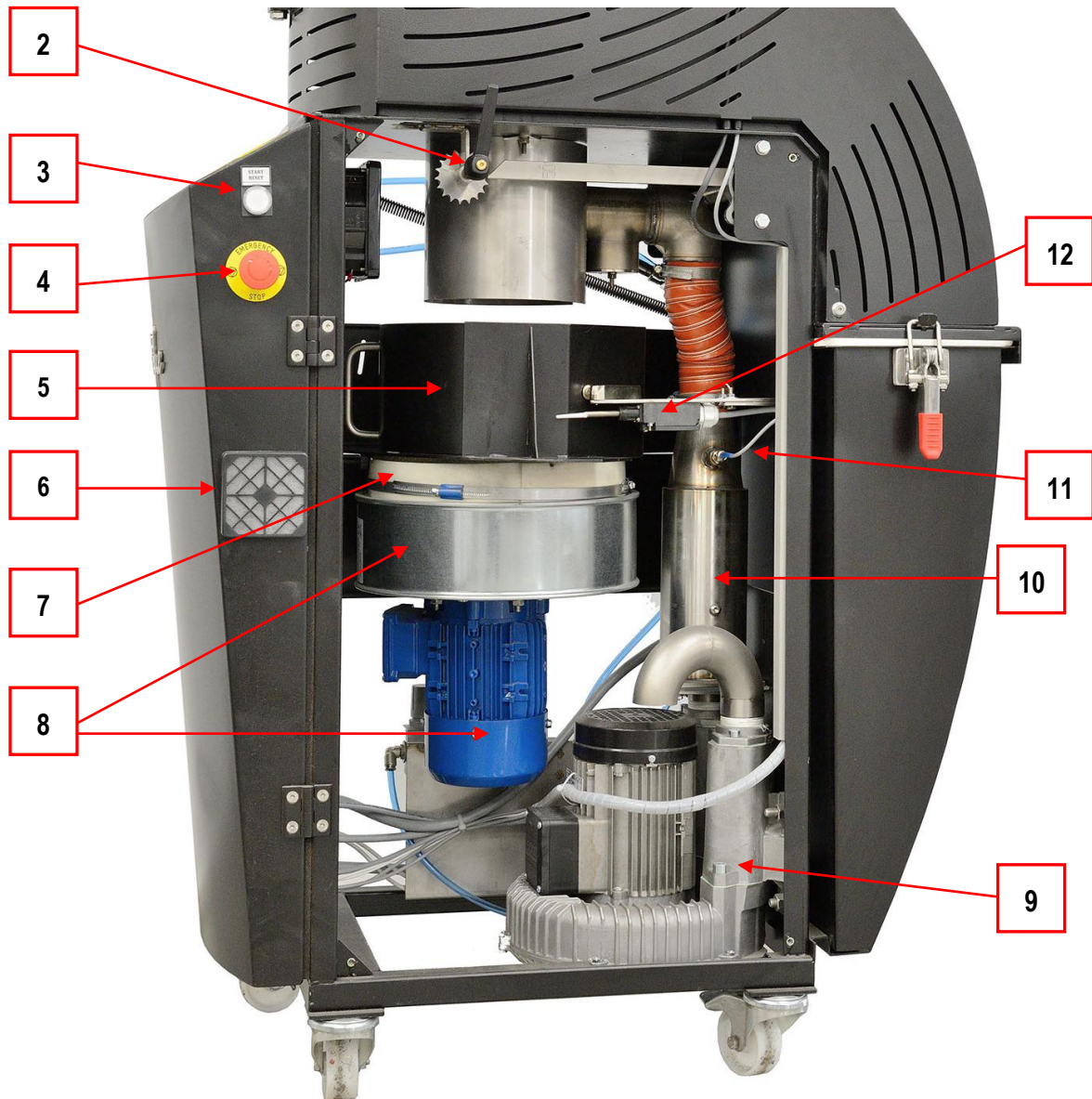
1. Charge hopper
2. Lever for opening the collecting skin tank
3. Collecting skin tank
4. Swivelling wheels
5. Electrical panel
6. Control panel
7. Cover lock screw

## 1.6. Internal components



1. Charge Hopper
2. Exhaust tube roasting smoke **diameter 80 mm**
3. Piston for the opening of the roasting chamber and let the product fall into the cooling chamber.
4. Exhaust cooling smoke **diameter 80 mm**
5. Roasting chamber opening electrovalve
6. Roasting chamber blow electrovalve
7. Air compressed connection
8. Power supply 380V cable
9. Manometer
10. Handle for the cooling chamber opening
11. Swing for the closure of the roasting chamber
12. Leverage to open/close the blow.

## Internal components



1. Cylinder for the product descent into the cooling chamber
2. Handle for manual vibration
3. START/RESET button
4. Emergency button
5. Cooling chamber
6. Cooling fan electrical panel
7. Cooling fan
8. Blower
9. Electrical heating
10. Cooling chamber position sensor
11. Air temperature probe
12. Cooling chamber position probe

## Internal components

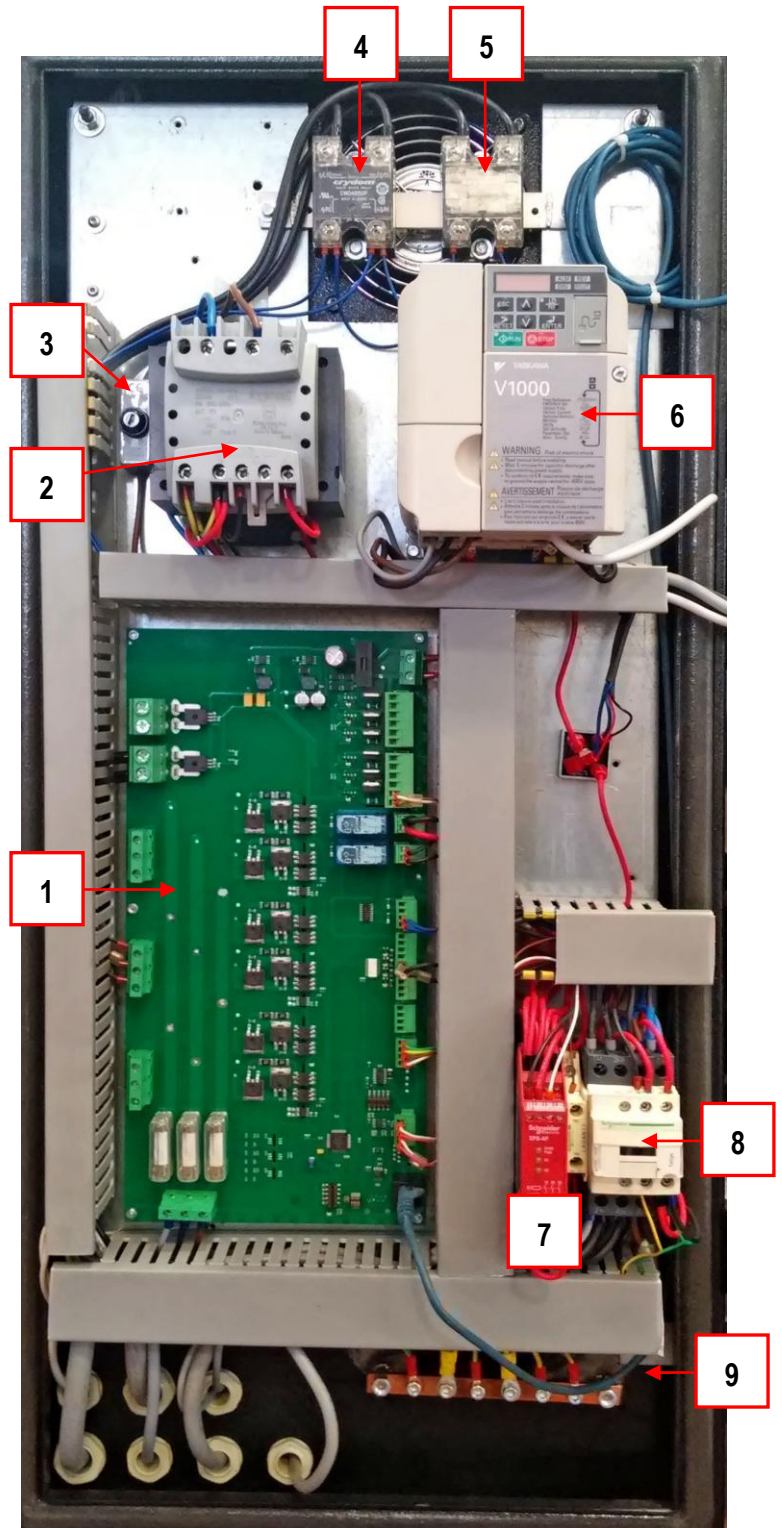
1. Roasting chamber closing carter
2. Roasting chamber inspection glass
3. Light for the roasting chamber
4. Heart product temperature probe
5. Roasting smoke filter
6. Roasting hopper
7. Command panel



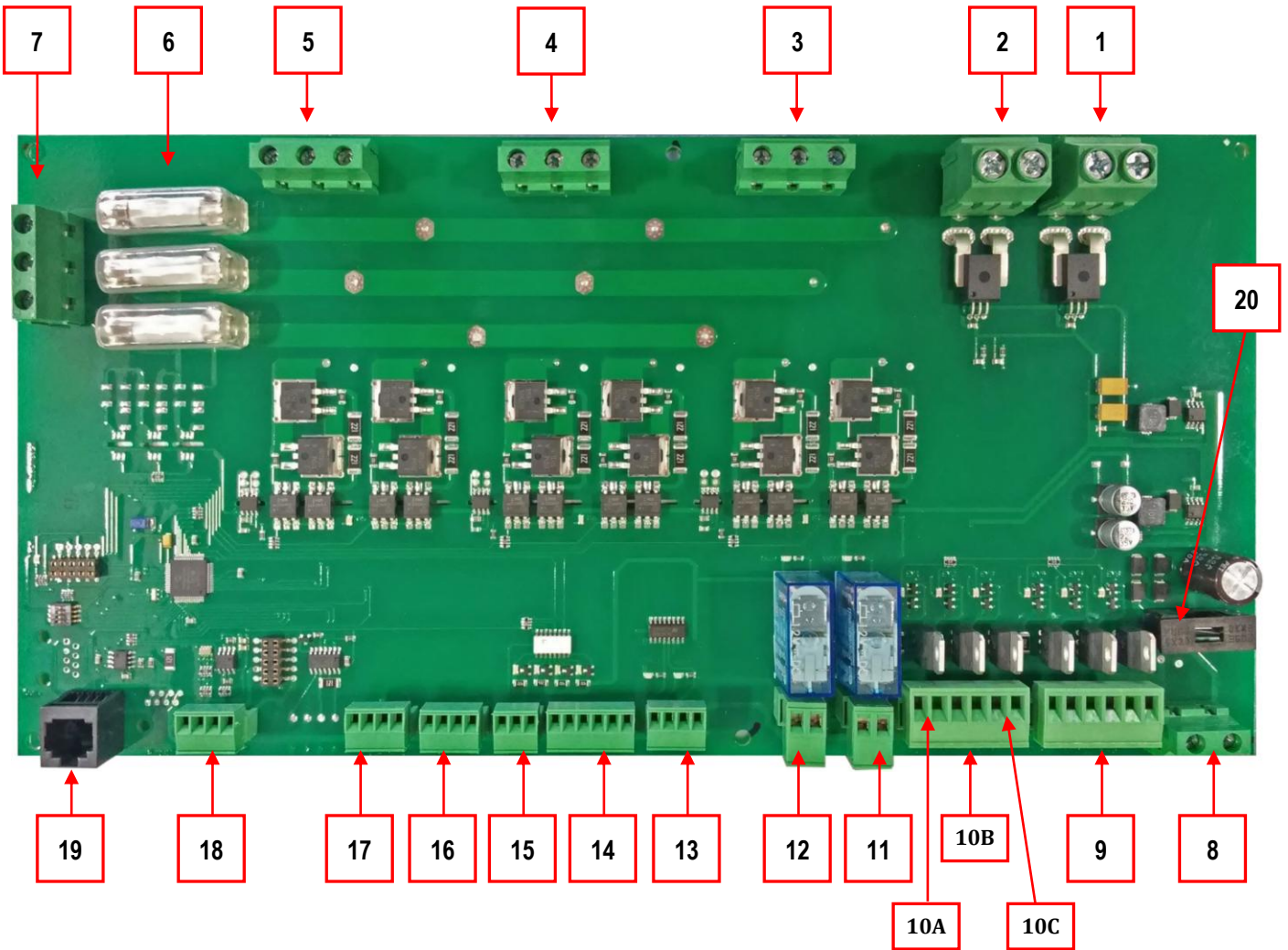


## Electrical panel

1. Power board
2. Transformer 220V/24V
3. Protection fuse
4. Security relay for the electrical heating
5. Security relay for the electrical heating
6. Inverter
7. Preventa module
8. Main contactor
9. Circuit equipotential



**Power board**



- |   |   |
|---|---|
| 1. Absorption control electrical resistance | 13. Relay Heating resistance                          |
| 2. Empty                                    | 14. Micro security open closing cooling chamber door. |
| 3. Mixer motor connection                   | 15. Empty   |
| 4. Cooling fan connection                   | 16. Inverter roasting blower connection               |
| 5. Empty                                    | 17. Empty   |
| 6. 380V protection fuses                    | 18. Probes connections                                |
| 7. Connection 380V                          | 19. Flat cable connection                             |
| 8. Connection 24V a.c.                      | 20. 24V protection fuse                               |
| 9. Air compressed for clean the cone        |   |
| 10. Solenoid pneumatic actions              |   |
| A. Opening the roasting cone                |   |
| B. Empty                                    |   |
| C. Air compressed blow                      |   |
| 11. Fan cooling electrical panel            |   |
| 12. Lights roasting chamber connection      |   |

### 1.7. Details of the manufacturer

The machine described in this instruction manual was built by:

SELMi S.r.l.

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

### 1.8. Identification plate of the machine (CE marketing)

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



Example of identification plate on the machine structure

TYPE  
SERIAL NUMBER  
YEAR  
WEIGHT

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

Example of identification plate on electrical panel. For the correct data, see the data shown in the section on the machine's technical specifications.



### 1.10. Inteded use

The coffee roaster Roaster Centodue uses an original and exclusive air cyclone system (vertiflow® patent) which is very versatile and can also be used for the roasting of hazelnuts, almonds, pistachios, barley, etc. The machine has a number of programs which control the heating temperature of the air used for roasting via the probe at the heart of the product which identifies the correct roasting time, cooling time and the final emission of the product. The programs can be personalised to obtain the desired grade of roasting time after time.

#### Warning

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

### 1.11. Operating environment

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

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

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

#### Attention

**The machine's fixed guards have a variety of openings to allow the internal units to cool. When the machine is running, make sure that these openings are not covered by cloths or objects that obstruct proper air flow.**

### 1.12. Noise level

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

### 1.13. Caratteristiche tecniche

#### Caratteristiche meccaniche

Roasting capacity:	da 0,5 a 2,5 Kg
Roasting chamber:	inox AISI 304 L
Heating:	ceramic round resistances
Programm control:	Digital Display with microchip

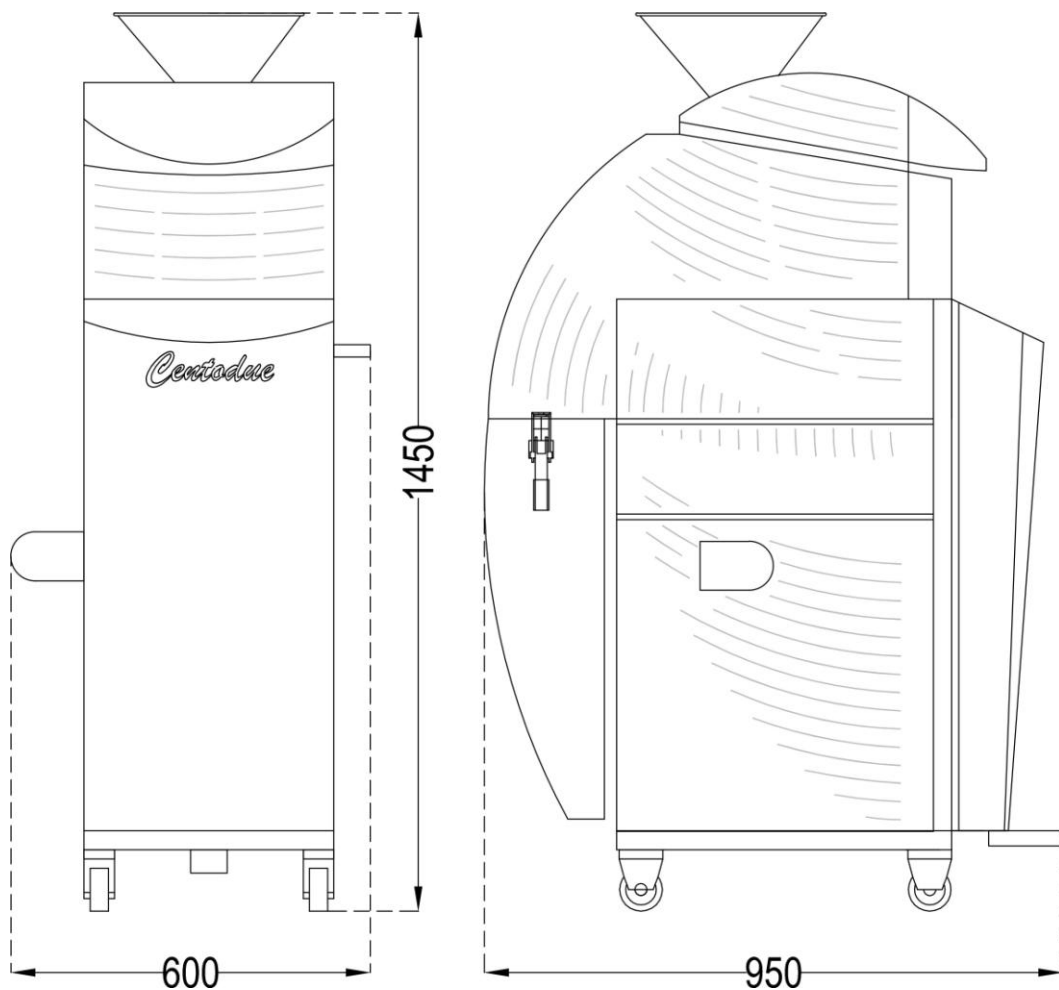
Air compressed required	120 l/min
Pressure:	6 bar
Air Characteristics	Dry, disoiled, filtered

#### Caratteristiche elettriche

Power installed:	10 kW
Voltage supply:	220V or 380V*
Number of phases:	3
Frequency:	50Hz or 60Hz*
Protection:	IP65

\* This data can change according to the contractual installation conditions. For correct data refer to the plate inserted inside the electric panel.

### 1.14. Dimensions



### 1.15. Storage

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

Clean the tank, the removable components and the pipes.

#### **Attention**

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

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

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

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

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

### 1.16. Disposal

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

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

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

#### **Environment**

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

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

### 1.17. Warranty

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

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

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

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

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

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

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

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

The warranty does not cover damage caused by the following:

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

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

### 1.18. Person qualified to operate the machine

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

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

#### **Attention**

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

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

#### **Safety officer**

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

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

#### **Operator (user of the machine)**

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

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

#### **Mechanical maintenance technician**

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

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

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

#### **Electrical maintenance technician**

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

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

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

#### **Manufacturer**

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

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

## 2. Safety section

### 2.1. Safety information

#### **Attention**

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

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

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

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

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

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



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

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

### 2.2. Safety limitations

#### **Attention**

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

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

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

#### **Attention**

The use of the machine is forbidden to personnel who have not been authorized or trained by the safety officer. Consult the manufacturer before carrying out procedures that are not mentioned in this manual.

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

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

It is forbidden to climb on the machine.

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

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

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

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

### 2.3. Safety symbols and plaques

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

#### **Attention**

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

Replace the damaged plaques with the new ones from the manufacturer. If a plaque happens to be on a part that is being replaced, make sure that a plaque is present on the new piece. For the cleaning of the plaques consult the appropriate section (6.3).

#### **ATTENTION**

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

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

**WORK MAY ONLY BEGIN WHEN THE SAFETY MEASURES HAVE BEEN IMPLEMENTED**

**IN OBSERVANCE OF PRESIDENTIAL DECREE 543 ON THE PREVENTION OF ACCIDENTS**



(positioned on the door of the electrical panel)



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

### 2.4. Safety and protection devices

#### **Attention**

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

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

The safety devices present on the machine are:

- *Mushroom emergency button with mechanical unblock mechanism.*



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

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



- *Protective devices*

The machine is equipped with protective plates that can be removed with a tool to allow access to the inside of the machine in order to carry out maintenance operations.

The fixed protective plates are screwed into position and can be removed with the appropriate tool; if the screws are removed the fixed protective plates will not remain in place and must be placed on the floor.

All the protective plates have smoothed and rounded edges for the safety of the exposed individual and of the operators.

The protective plates have loss-proof screws that remain attached to the plate when it is removed from the machine.

### **Attention**

**Do not switch the machine on if the protective panels are removed or not correctly fixed into position with the appropriate screws.**

**Do not forget to remove cloths, keys or utensils used for the maintenance operation from within the machine.**

Before closing with the protective panels and switching on the machine check carefully and if necessary remove any extraneous objects which may be present inside the machine.

All protection and safety devices must always be kept in perfect working conditions. If faulty, they must be immediately repaired or replaced.

The replacement, disengagement, partial or total removal of the protective plates, safety devices and protective structures must only be carried out during maintenance operations. This also applies to the safety plaques attached to the side of the machine.

## **2.5. Client's safety measures**

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

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

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

The customer must also provide for:

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

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

## **2.6. Personal protection equipment**

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

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

### **Warning**

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

### **Attention**

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

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

## **2.7. Residual risks**

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

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

### **Attention**

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

### **Attention**

**Keep the machine with the residual chocolate inside the tank in an adequate environment with temperatures ranging from 10 °C to 25 °C.**

The residual risks present on the machine are:

#### *Risks during machine transportation*

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

*Risks of faults to the circuits of signalling, safety,*

## **3. Moving and transportation section**

### **3.1. General norms**

Before moving the machine always check the weight

#### *protection and emergency stop*

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

#### *Identified residual risks and information plaques*

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

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

### **Attention**

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

#### *Risk to life (electrolocation)*

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

#### *Risk of spreading fire*

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

## **2.8. Applied Directives**

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

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

And the regulation:

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

## **2.9. Harmonized technical norms**

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

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

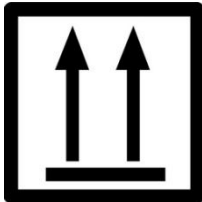
and general instructions shown on the packaging. Personnel not responsible for the movement of the machine must not remain in the area needed for movement.

### 3.2. Packaging

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



Instructions for transportation are on the sides of the packaging.



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



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



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

#### Attention

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



### 3.3. Transportation

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

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

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

The machine can be lowered to the ground from the platform only after having lowered the manual trolley.

The machine should be lowered slowly from the platform, avoiding shaking and sudden stops which could cause a loss of stability.

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

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

#### **Attention**

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

### 3.4. Removal of the packaging

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

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

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

Very carefully lower the machine from the platform.

#### **Note**

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

## 4. Installation section

### 4.1. Positioning

#### **Warning**

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

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

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

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

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

#### **Attention**

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

### 4.2. Electrical connections

#### **Attention**

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

#### **Attention**

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

#### **Attention**

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

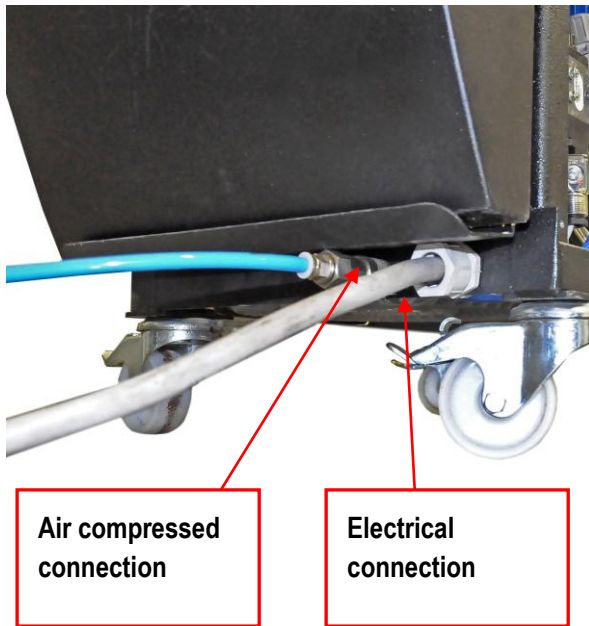


### 4.3. Air compressed connection

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

#### **Attention**

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



## 5. Operation section

### 5.1. CONTROL PANEL

The Roaster machine is equipped with a touch screen; here there are the display pages

#### 1- Home page

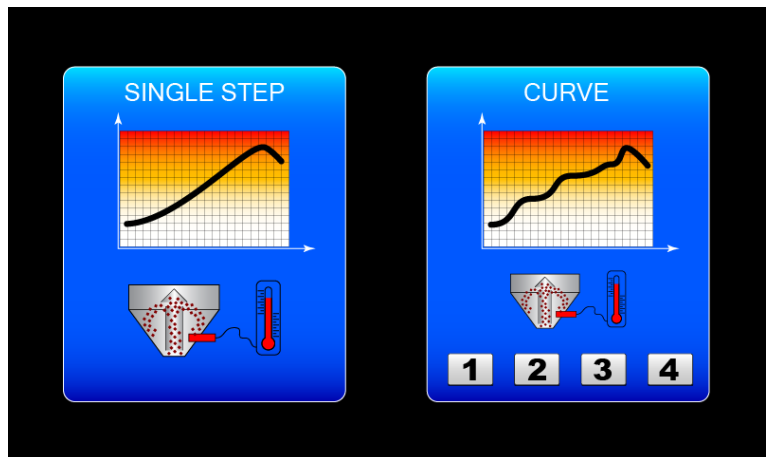
Push on the "Selmi roasting machines" logo to go to the next page



#### 2 - Roasting mode page

Normal roasting

Curve Roasting where you can split the roasting and generate a roasting graphic like a curve

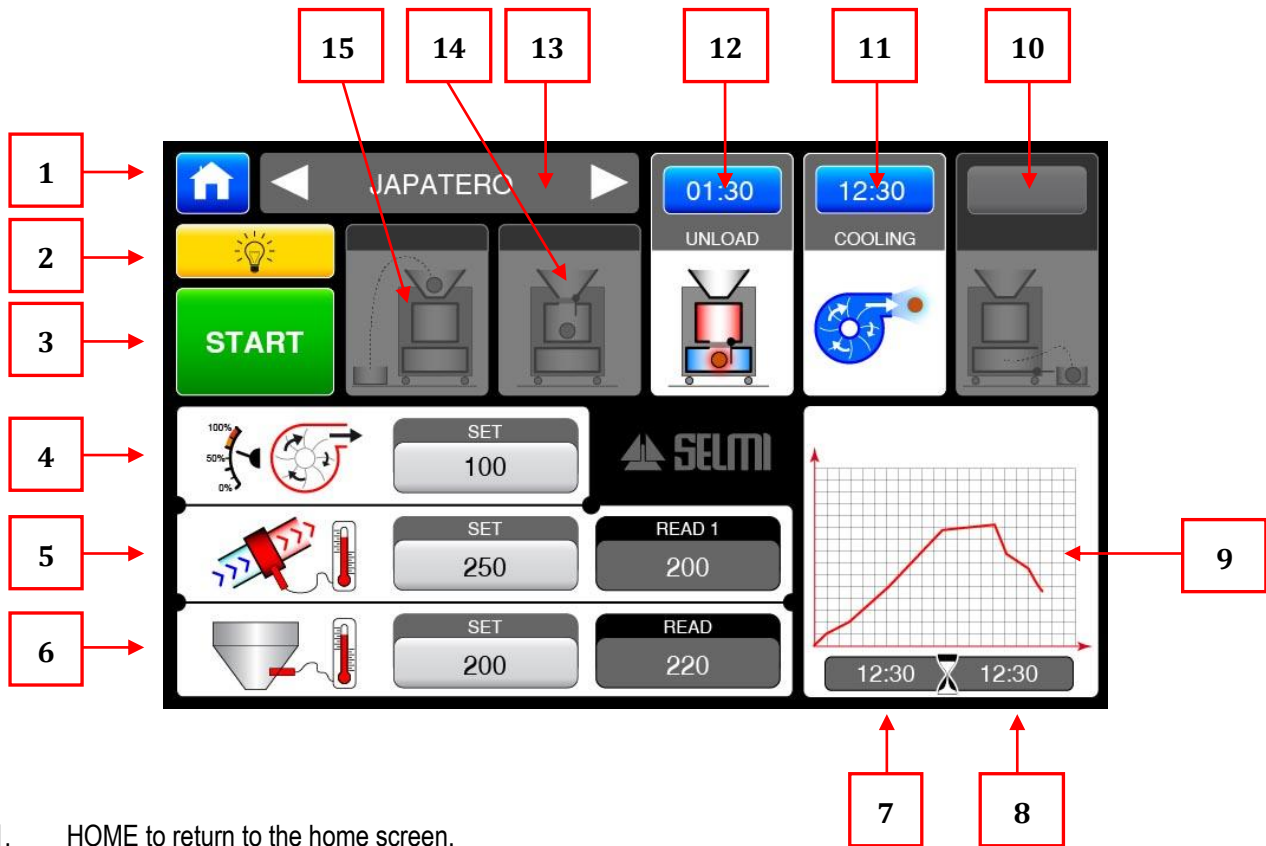


#### KEYBOARD

Orange buttons have a variable value that you can set. pushing on them it will appear a keyboard that let you modify the value and then return (pushing enter) to the previous page



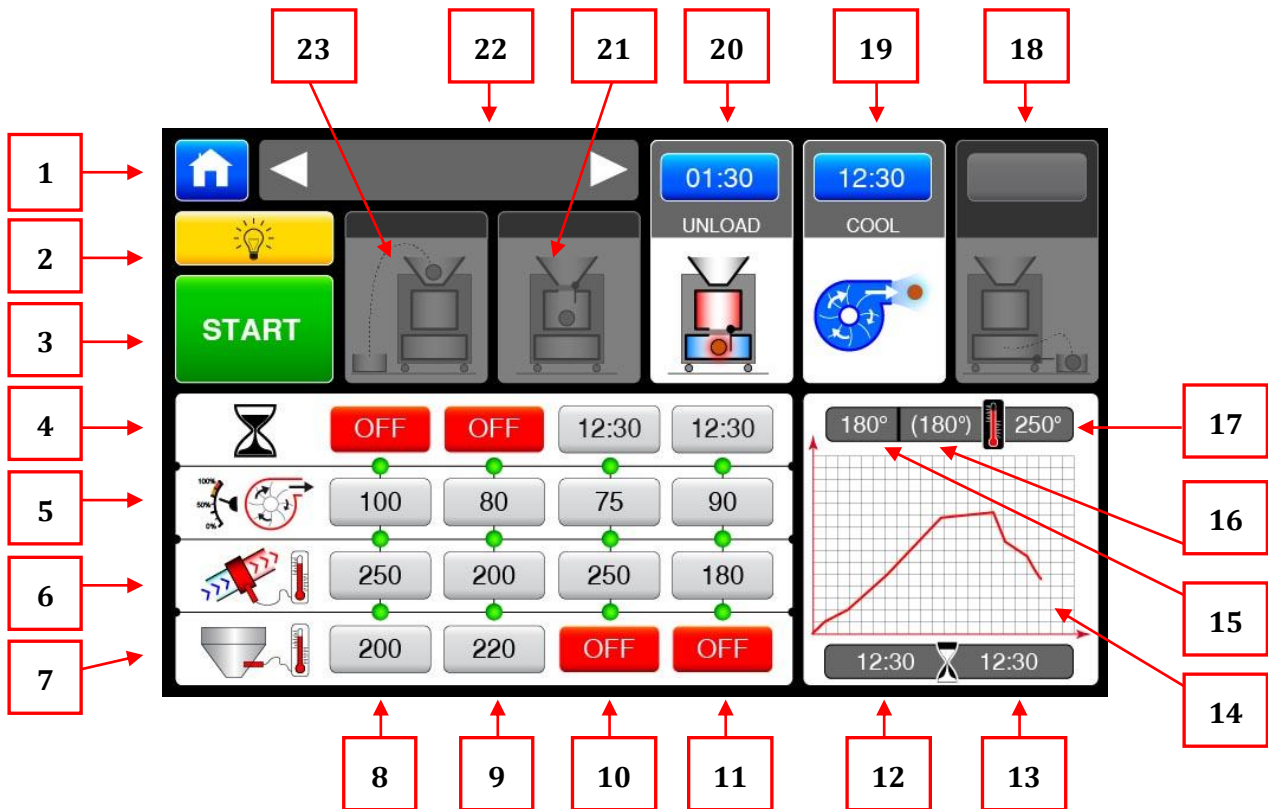
## "HEART TEMPERATURE" WORK SCREEN



1. HOME to return to the home screen.
2. LIGHT to switch on / off the light in the roasting chamber
3. START / STOP to start or stop the cooking cycle.
4. BLOWER INTENSITY By pressing the SET key you can set the blower intensity percentage
5. AIR TEMPERATURE:  
SET to set  
READ 1 to read the blower air temperature below  
READ 2 to read the temperature of the side blower air
6. PRODUCT TEMPERATURE:  
SET to set  
READ to read the temperature of the product inside the roasting chamber
7. Progressive processing time
8. Cool down countdown
9. Cooking graph: the temperature value on the ordinates and the time on the abscissas generate the cooking graph.
10. UNLOADING THE FINISHED PRODUCT: the duration can be set.
11. COOLING OF THE TOASTED PRODUCT: you can set the duration of the cooling.
12. UNLOADING THE TOASTED PRODUCT INTO THE COOLING CHAMBER: you can set the time during which the valve for the descent of the product remains open.
13. RECIPE NAME: right or left arrow to change recipe with the next or previous one
14. ONLY FOR ROASTER 120: UNLOADING THE PRODUCT INTO THE COOKING CHAMBER: press the button to unload the product from the hopper into the cooking chamber.
15. ONLY FOR ROASTER 120: LOADING THE PRODUCT: press to activate the aspirator which loads the product into the loading hopper

## WORK SCREEN WITH "CURVE" COOKING

Using this toasting function it is possible to divide the toasting cycle into 4 phases. Each of which can have different settings.



1. HOME to return to the home screen.
2. LIGHT to switch on / off the light in the roasting chamber
3. START / STOP to start or stop the cooking cycle.
4. PHASE DURATION: set the duration for each phase.
5. BLOWER INTENSITY: set the blower percentage for each phase.
6. AIR TEMPERATURE: set the desired temperature for each phase.
7. PRODUCT TEMPERATURE: set the desired temperature for each phase.
8. PHASE 1: once a core temperature has been set, the duration of the cycle is determined by reaching the temperature, therefore OFF is displayed on the time line. Conversely, once a cycle duration has been set, OFF is displayed on the temperature line. This is valid for all stages
9. STEP 2
10. STEP 3
11. STEP 4
12. Progressive working time
13. Cooling down countdown
14. Firing graph: the temperature value on the ordinates and time on the abscissas.
15. Thermometer indicating the temperature read by the lower blower probe
16. Thermometer indicating the temperature read by the side blower probe
17. Thermometer that indicates the temperature read by the probe in the core of the product.
18. UNLOADING THE FINISHED PRODUCT: the duration can be set.
19. COOLING OF THE TOASTED PRODUCT: you can set the duration of the cooling.
20. UNLOADING THE TOASTED PRODUCT INTO THE COOLING CHAMBER: you can set the time during which the valve for the descent of the product remains open.
21. ONLY FOR ROASTER 120: UNLOADING THE PRODUCT INTO THE COOKING CHAMBER: press the button to unload the product from the hopper into the cooking chamber.
22. RECIPE NAME: right or left arrow to change recipe with the next or previous one
23. ONLY FOR ROASTER 120: LOADING THE PRODUCT: press to activate the aspirator which loads the product into the loading hopper



## 5.2. USING THE MACHINE

1. Connect the machine to the supply line.
2. Connect the machine to the air compressed.
3. Connect the exhaust pipes to the right exhaust system.
4. Switch on the *Roaster "Centodue"*
- 5.

**Note:** we advice to keep the blue lever on the right side of the machine open ( up position ) when the machine roast dry fruits such as almonds and hazelnuts.

### SUGGESTED SETTINGS FOR ROASTER

	PRODUCT	FAN	AIR TEMP.	TEMP. PROD.	CONE
1	<b>"Light" hazelnuts</b>	90%	220° - 240° C	165° C	Dried Fruits
2	<b>Medium Roasted Hazelnut</b>	90%	220° - 240° C	173° C	Dried Fruits
3	<b>"Dark" Hazelnut</b>	90%	220° - 240° C	185° C	Dried Fruits
4	<b>Skinned "Light" Almond</b>	90%	220° - 240° C	135-140° C	Dried Fruits
5	<b>Skinned "Dark" Almond</b>	90%	220° - 240° C	170° C	Dried Fruits
6	<b>Almond with Skin</b>	90%	220° - 240° C	160° C	Dried Fruits
7	<b>Pistachio</b>	90%	220° - 240° C	150-155° C	Dried Fruits
8	<b>Peanut</b>	90%	220° - 240° C	170-175° C	Dried Fruits
9	<b>Cashew</b>	90%	220° - 240° C	165° C	Dried Fruits
10	<b>Macadamia</b>	90%	220° - 240° C	170° C	Dried Fruits
11	<b>Cocoa Bean</b>	90%	220° - 240° C	145° C	Dried Fruits
12	<b>Pine nut</b>	90%	220° - 240° C	140° C	Coffee
13	<b>Coffee</b>	90%	220° - 240° C	218-220° C	Coffee
14	<b>Deca Coffee</b>	90%	220° - 240° C	210-215° C	Coffee

## COFFEE ROASTING HOPPER



## DRY FRUIT ROASTING HOPPER



### 5.5. Position of the user

During the working cycle a sole operator is needed located in front of the working panel with easy access to the emergency button.

### 5.6. Involuntary electrical interruptions

If the voltage supply were to fail during the working cycle, a thermostat will prevent the machine from functioning for about 10/15 minutes (following the restoration operations) to allow the machine to return to its working temperature.

### 5.3. ALARMS

TIPOLOGIA ALLARME	POSSIBILE PROBLEMA
ALARM HEATER 1	The heater is absorbing more than the limit set into the parameters
ALARM HEATER 2	Only roaster centoventi
ALARM BLOWER 1	The blower is absorbing more than the limit set into the parameters
ALARM BLOWER 2	Only roaster centoventi
ALARM COOLING	The fridge is absorbing more than the limit set into the parameters
ALARM STIRRER	Only roaster centosei and centoventi
ALARM ASPIRATOR	Only roaster centoventi
MAINTENANCE	
CHANGE FILTERS CONTACT THE FACTORY	
EMPTY SKIN COLLECTOR	
BURNING RISK CONTINUE ONLY IF YOU CHANGED THE FILTER	
BURNING RISK CONTINUE ONLY IF THE TRAY IS CLEAN	
EMPTY BASKET	Only roaster centodue
INSERT BASKET	Only roaster centodue
ABSENCE BASKET	Only roaster centodue
WRONG TEMPERATURE DELTA THERMAL HEAT	Data not valid

## **6. Maintenance section**

### **6.1. General information**

#### **Attention**

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

#### **Attention**

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

#### **Warning**

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

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

#### **Note**

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

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

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

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

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

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

#### **Environment**

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

### **6.2. General safety practice**

#### **Attention**

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

#### **Attention**

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

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

- mechanical maintenance technicians;
- electrical maintenance technicians.

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

Before starting a maintenance procedure the safety officer must:

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

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

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

### **Attention**

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

Unless expressly required for the solution of a breakdown, never interfere with the adjustments and positioning of the limit microswitches; their tempering can cause serious damage to the machine and pose risks to the operator.

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

### **Note**

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

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

## MAIN CLEANING AND MAINTENANCE OPERATIONS

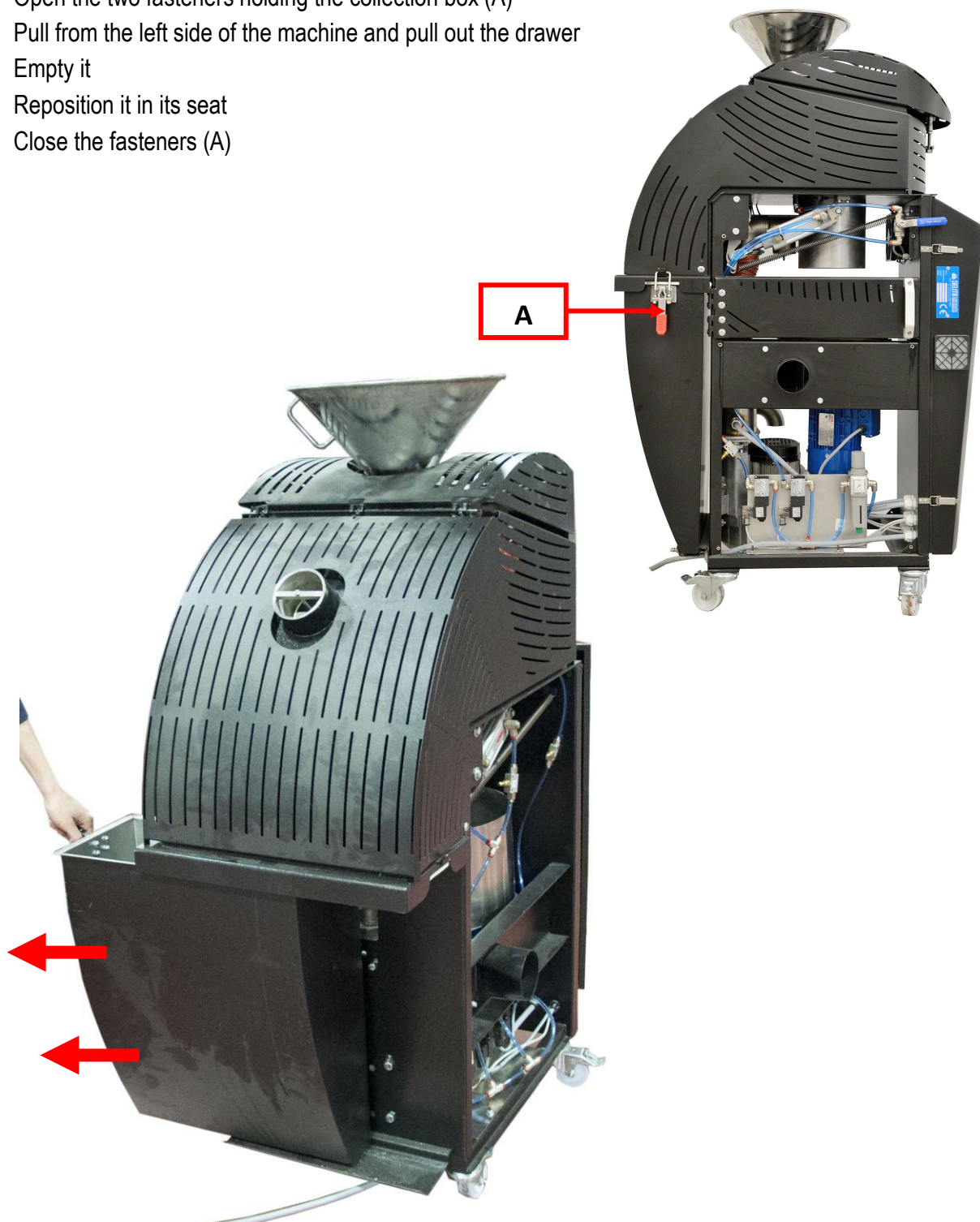
### Operations to be performed at the end of each day:

Empty the skin tray;

#### Attention:

**the dried fruit skin is very flammable, so do not forget to empty it, risk of fire.**

- Open the two fasteners holding the collection box (A)
- Pull from the left side of the machine and pull out the drawer
- Empty it
- Reposition it in its seat
- Close the fasteners (A)



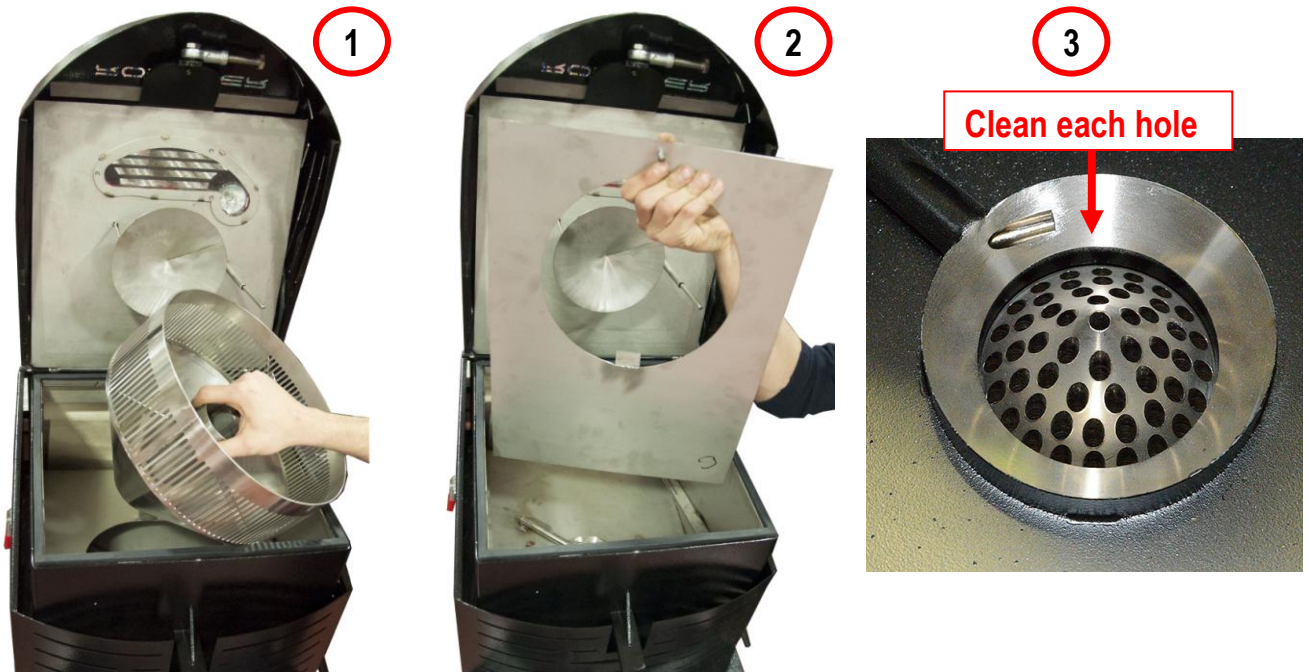
**Operations to be performed at the end of each day:**

**Clean the glass of the roasting chamber window from the inside:**

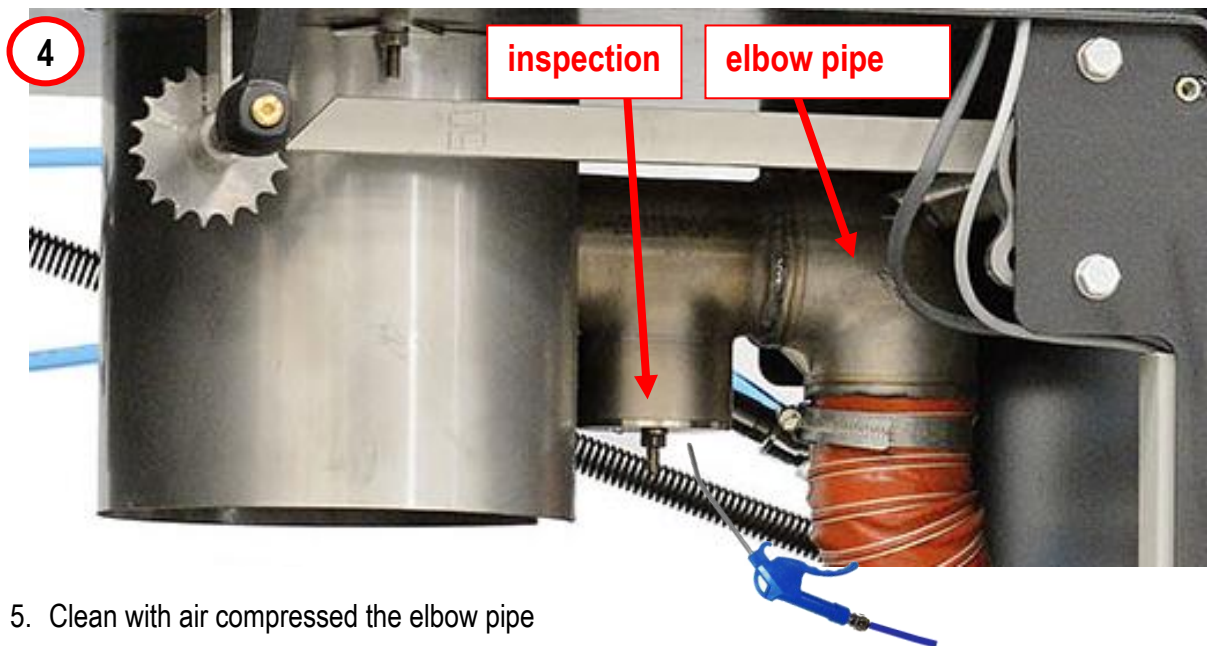
- Unscrew the bolt (B) that keep the roasting chamber closed
- Open the roasting chamber
- With a damp cloth clean the glass
- Close the roasting chamber and screw the bolt



## Clean the blowing cone



1. Remove the roasting chamber
2. Remove the plate that hold in position the roasting chamber
3. Take a steel wire and clean all the holes with the wire in a way to remove all the dirt from the holes.
4. Unscrew the inspection and remove alla the dirt, use also air compressed to clean it.



5. Clean with air compressed the elbow pipe
6. Screw the inspection, replace the plate and the roasting chamber.

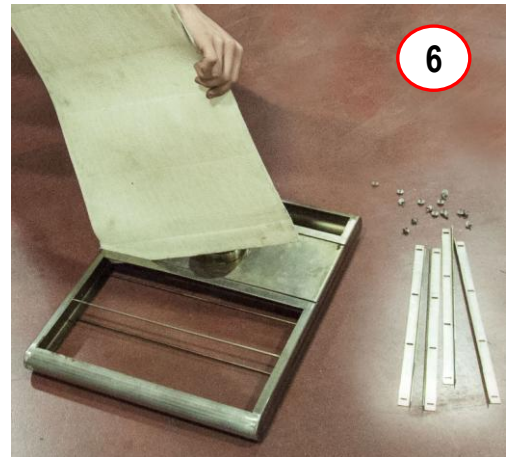
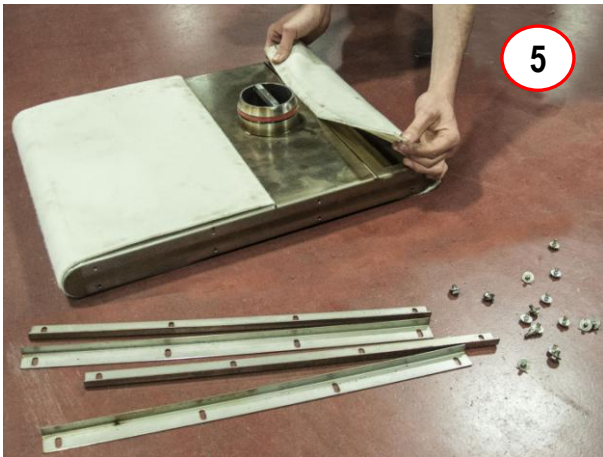


## Cleaning the filter



1. Remove the roasting chamber
2. Remove the plate
3. Unscrew the fastener of the filter
4. Extract the filter

## Replace the filter

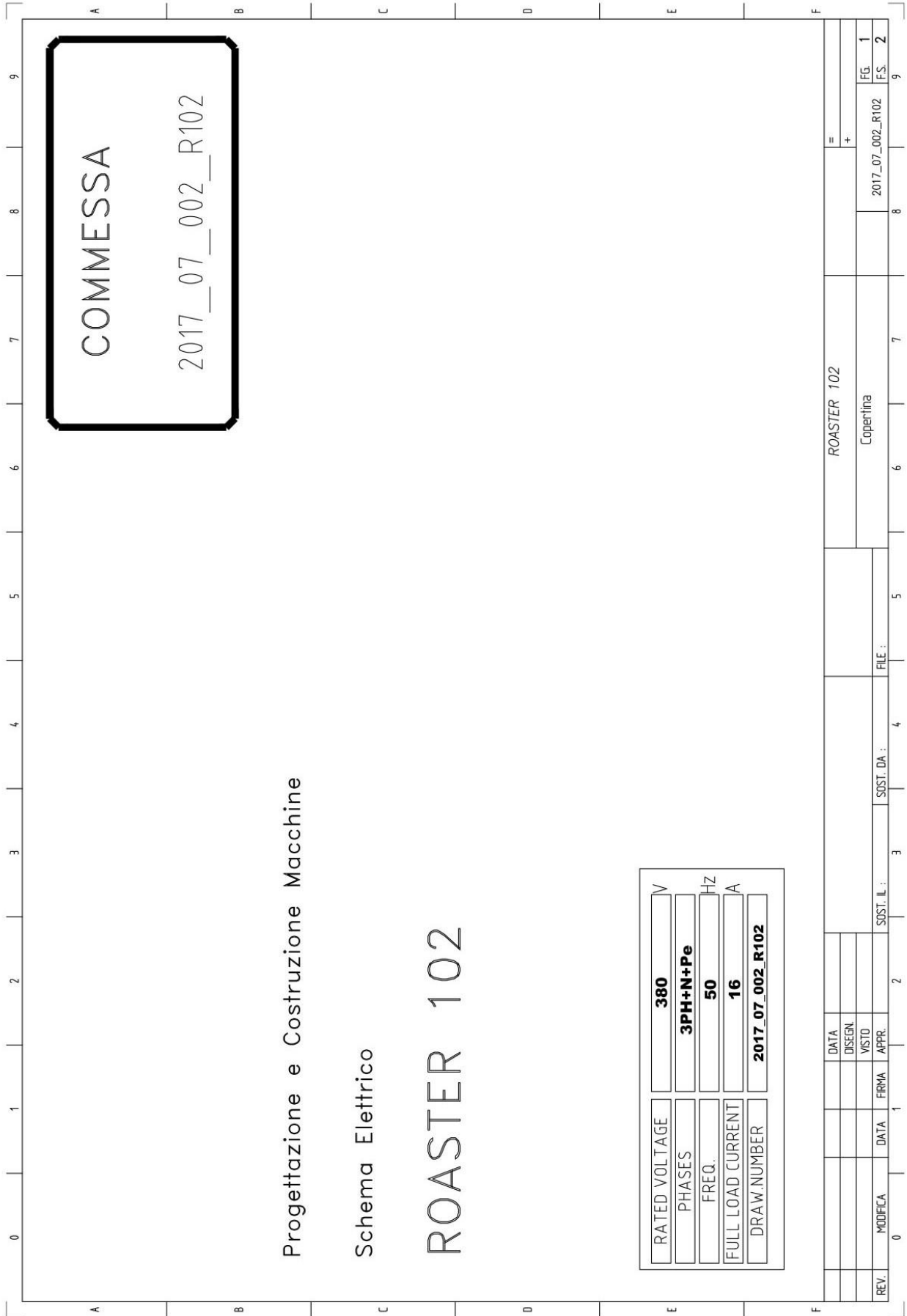


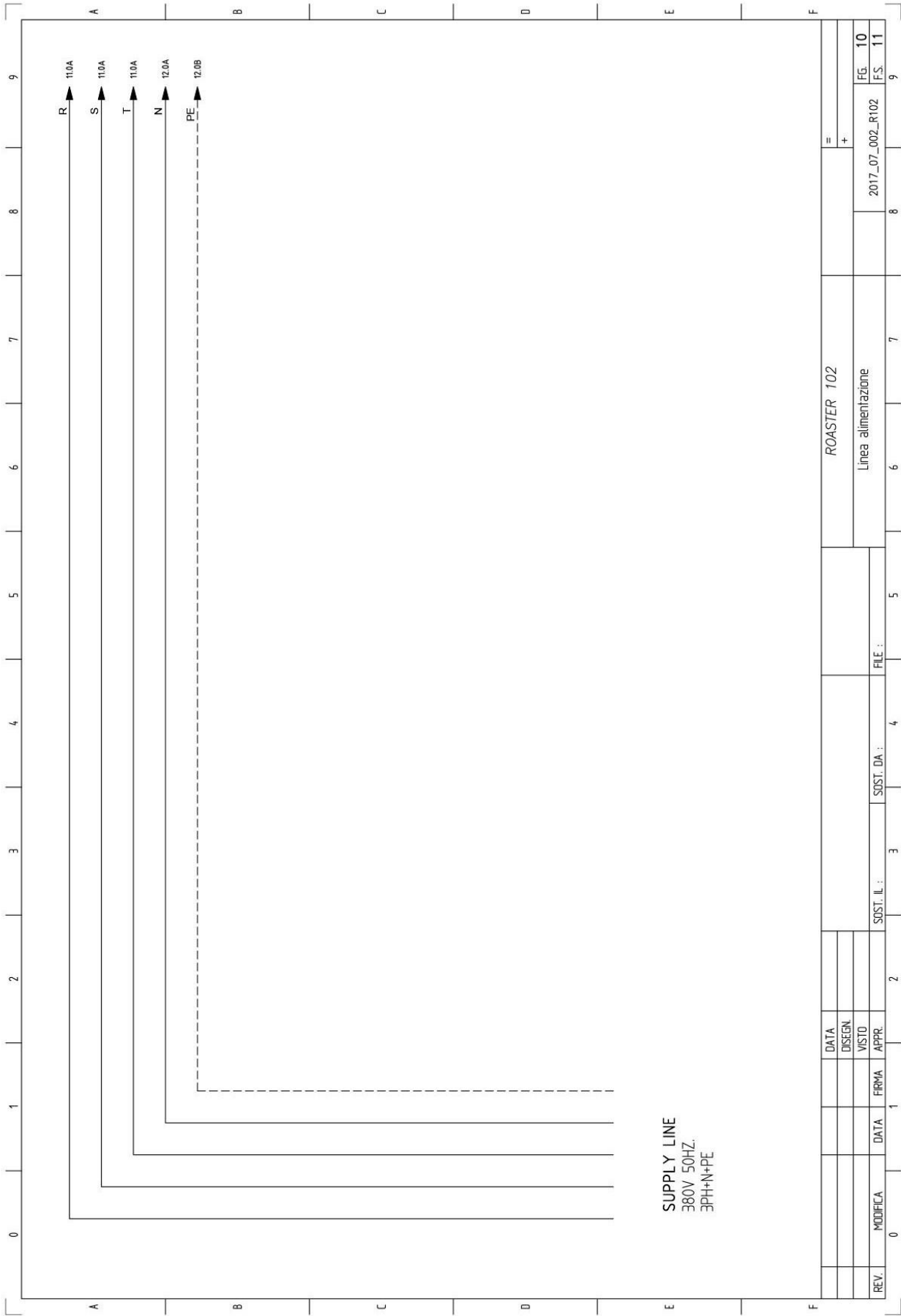
5. Unscrew and disassemble the filter
6. Clean the tissue or replace the old tissue with a new one  
Assemble the filter in its position.

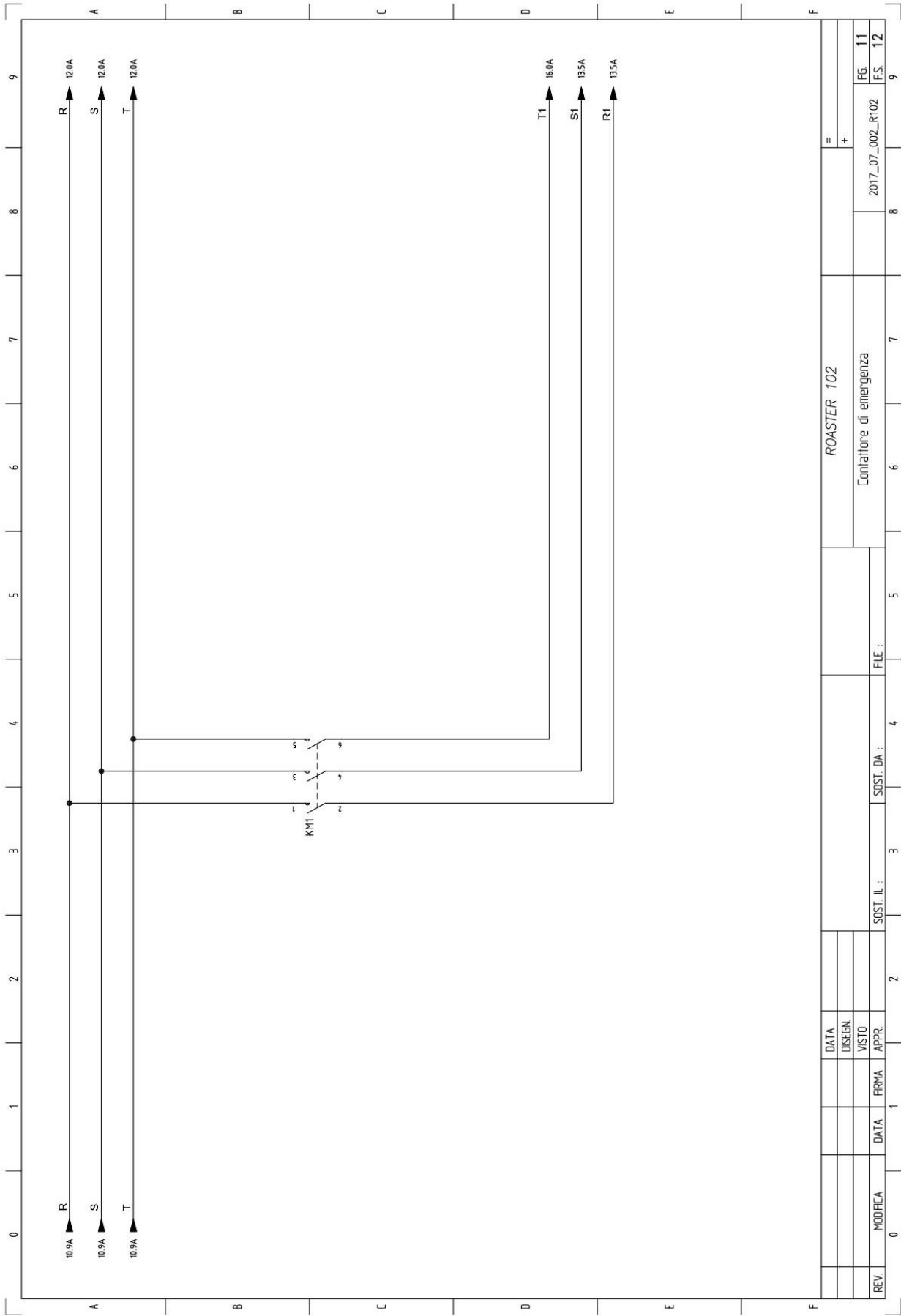
Every 6/8 month (depend how much the machine works)

Replace the filter

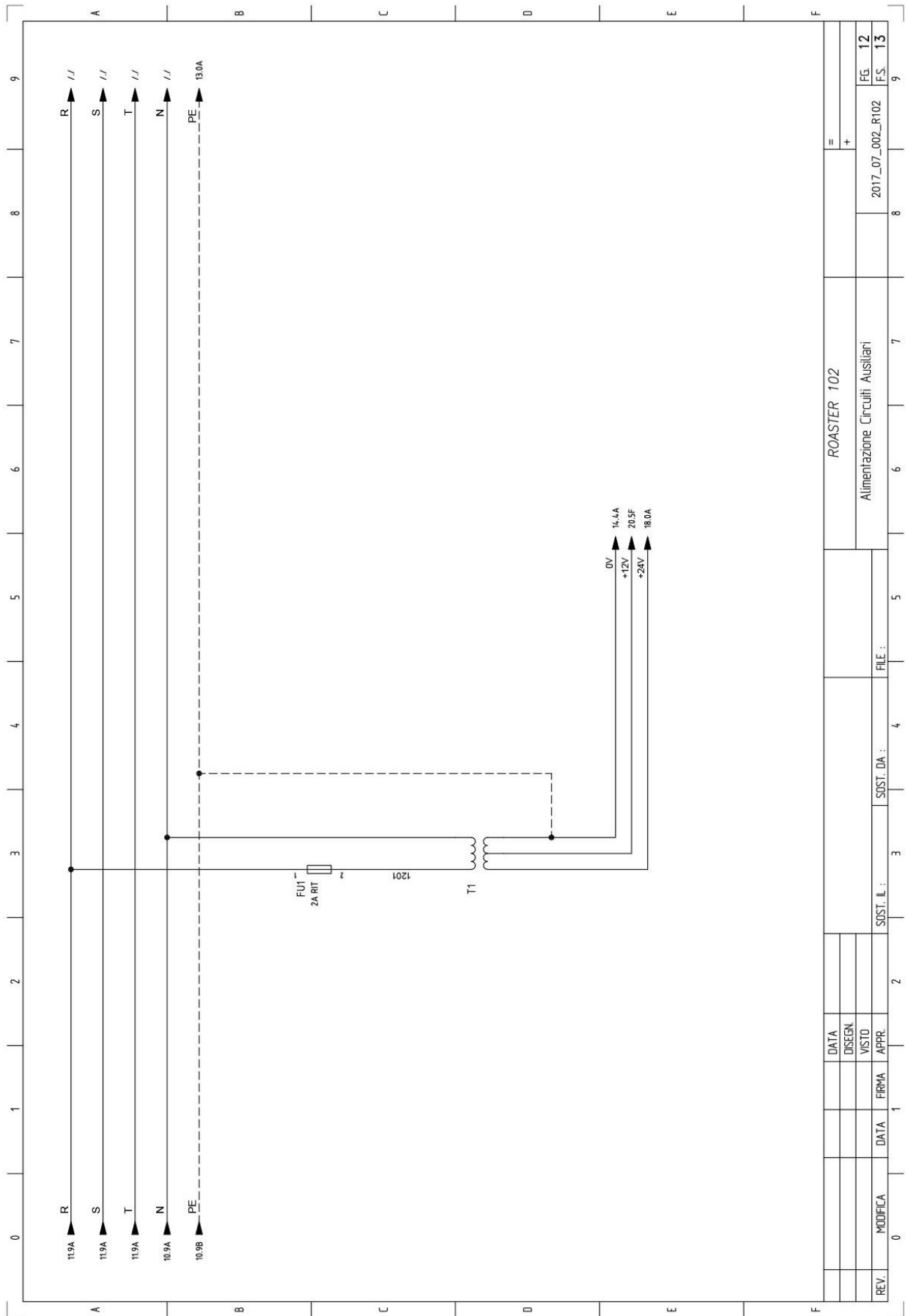
# 7. ELECTRICAL DIAGRAMS

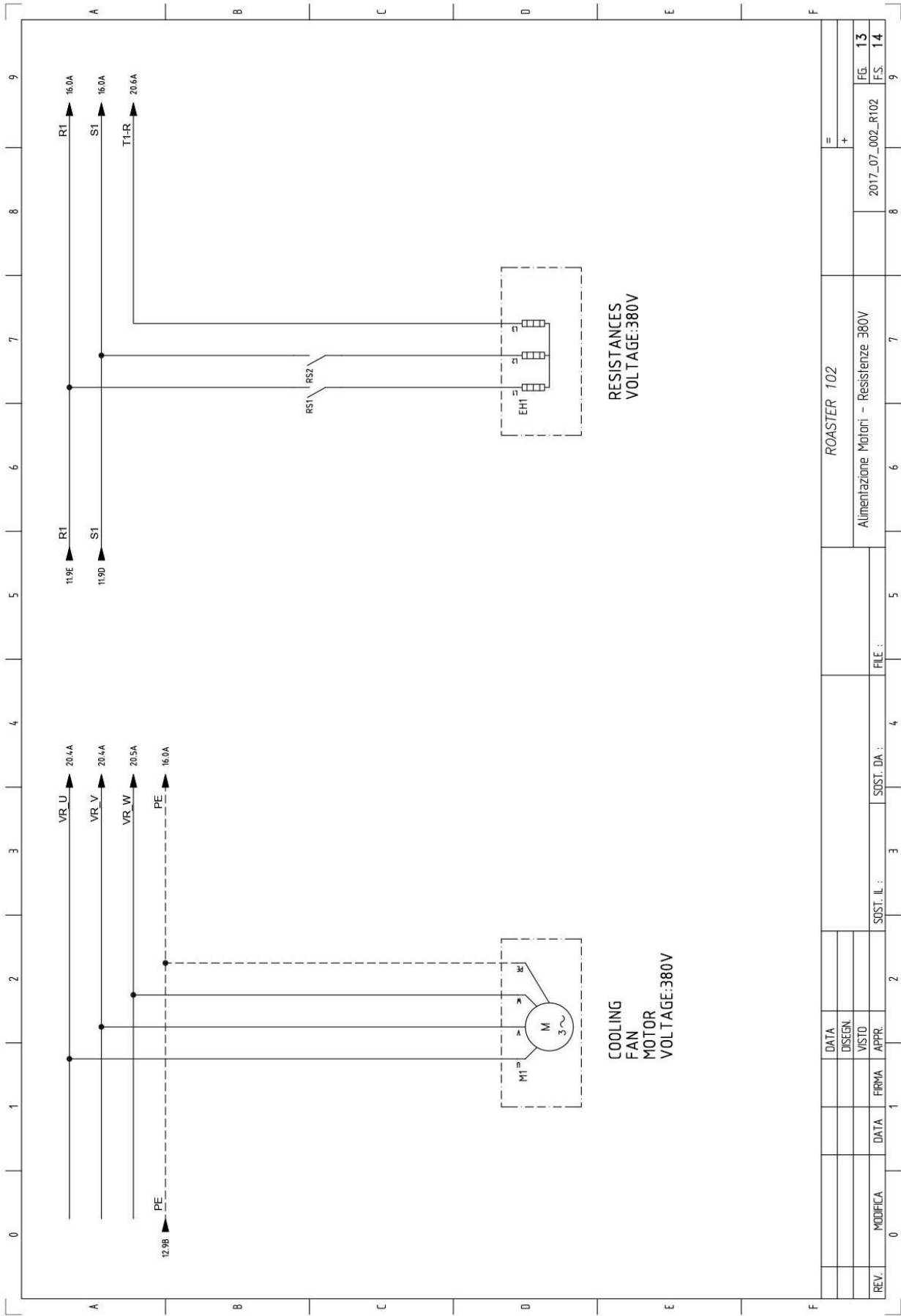


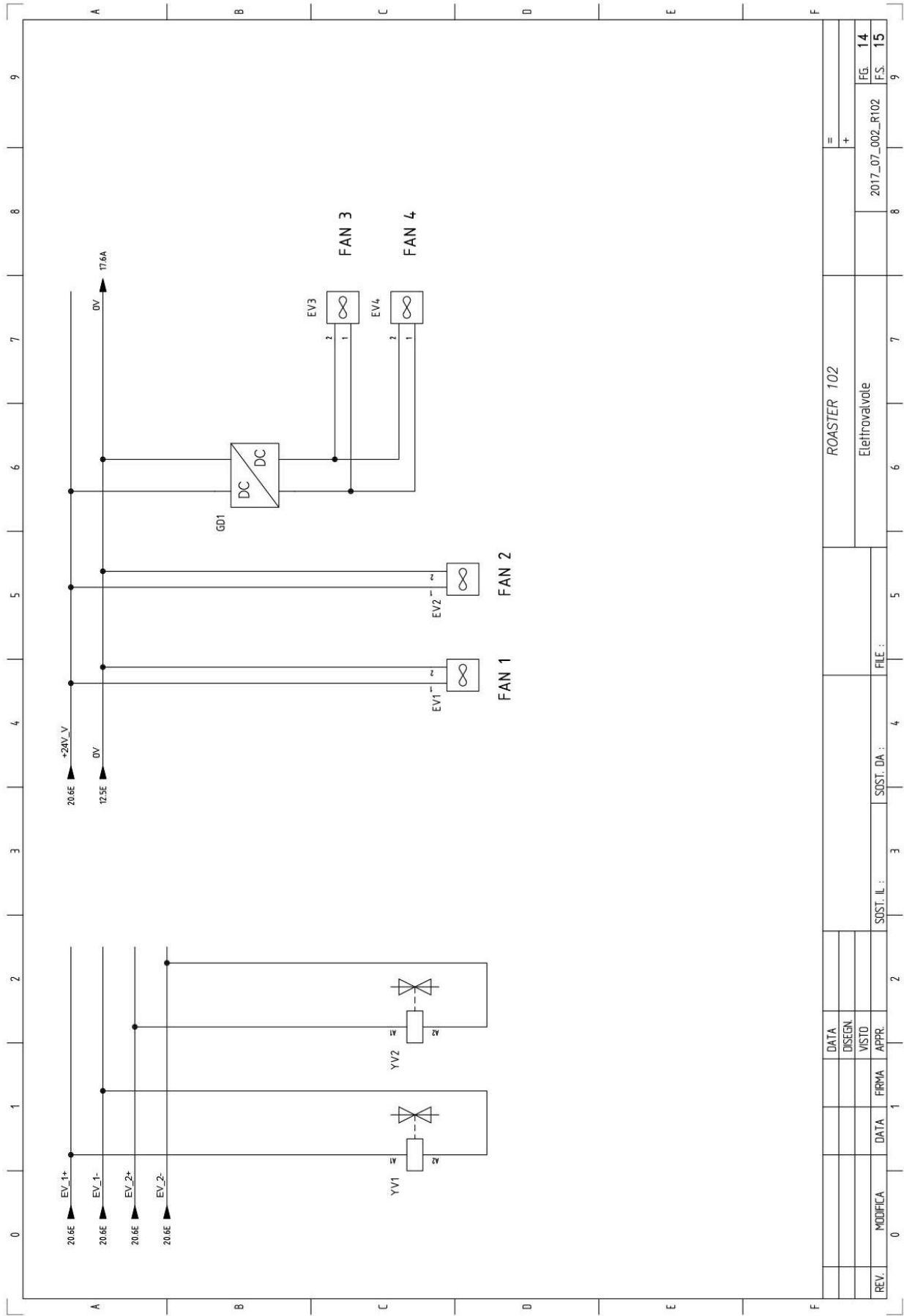




REV.	MODIFICA	DATA	FRMA	APPR.	SOST. IL.	SOST. DA	FILE	ROASTER 102	Contattore di emergenza	2017_07_002_R102	FG. 11	F.S. 12
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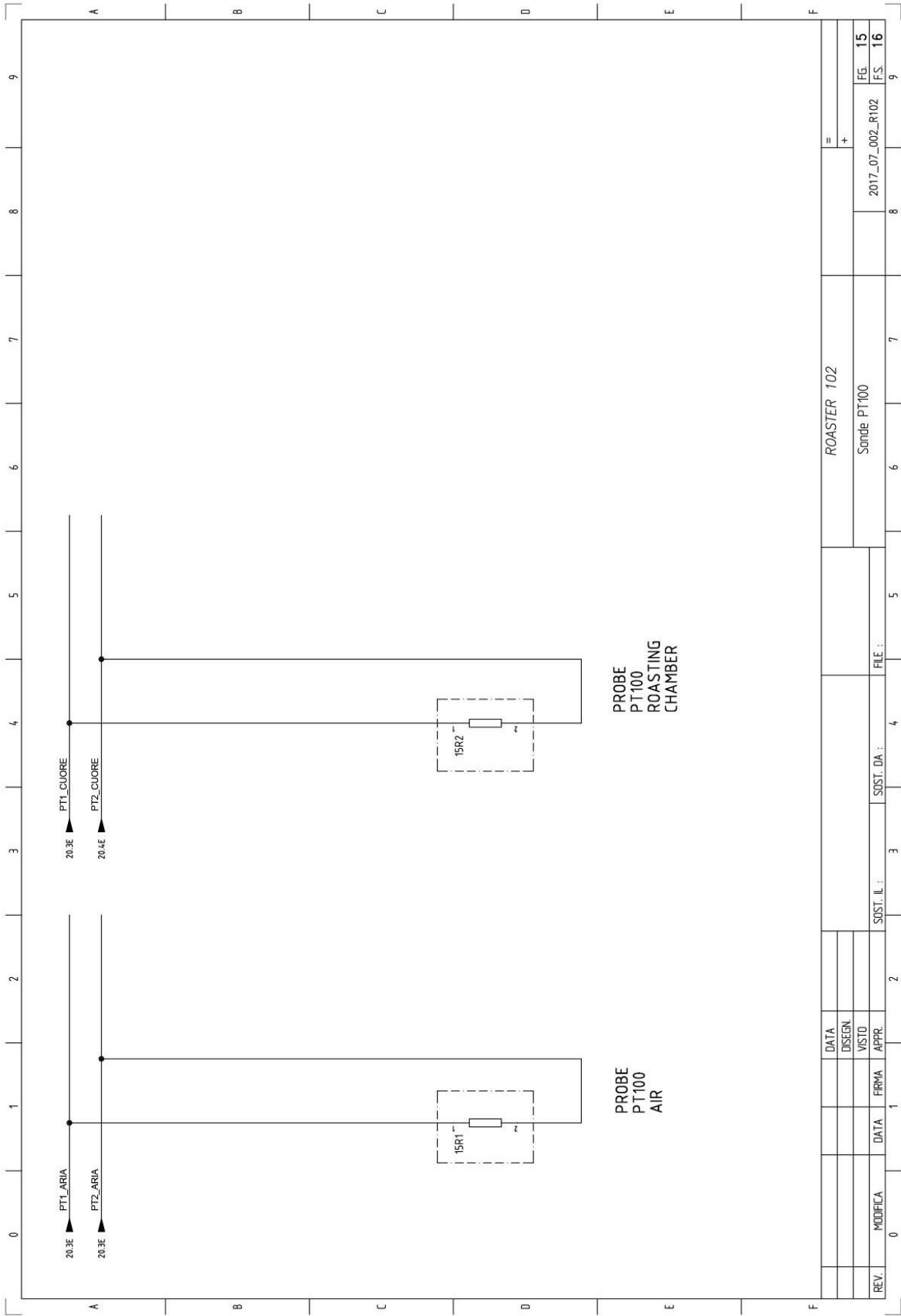


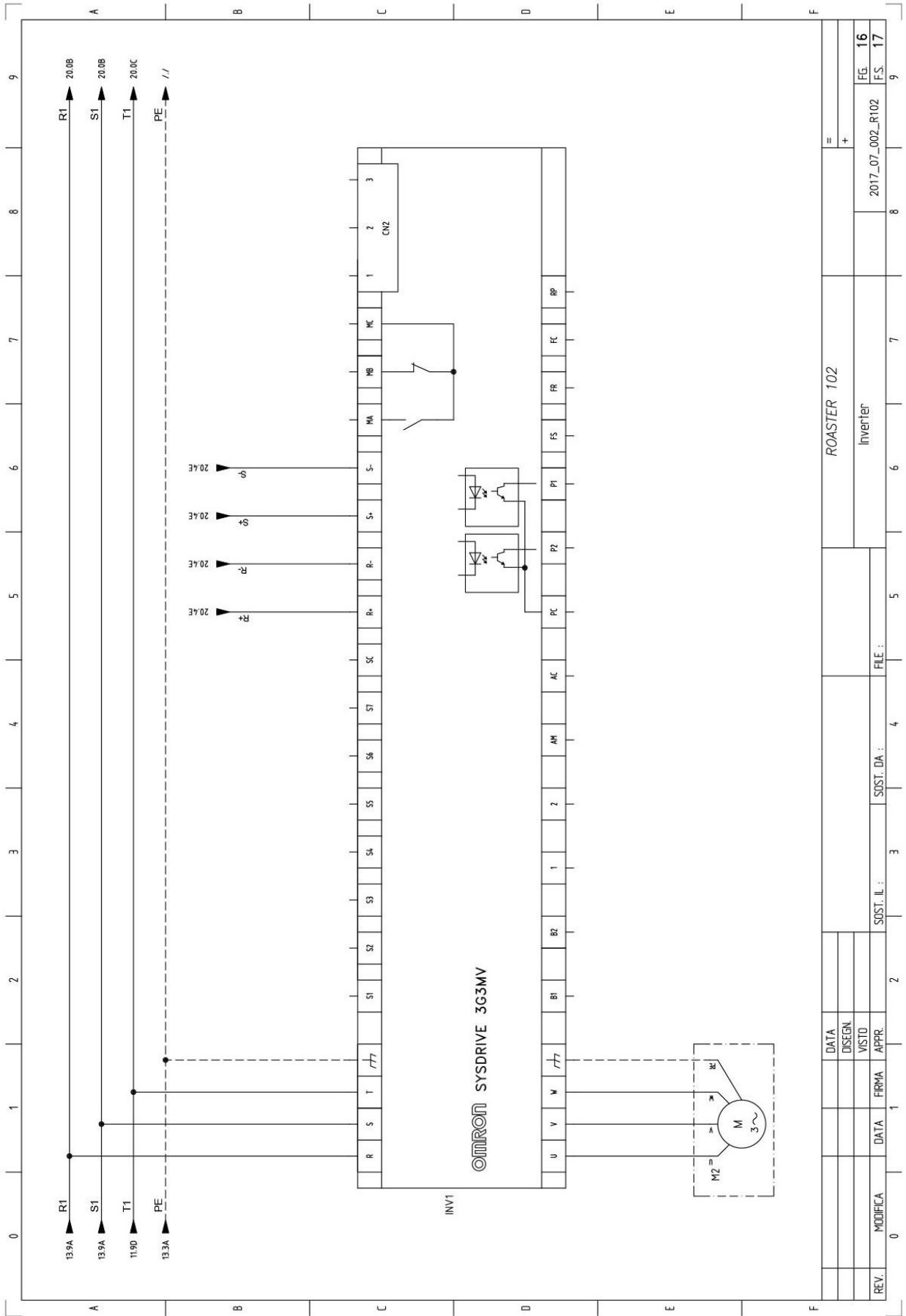




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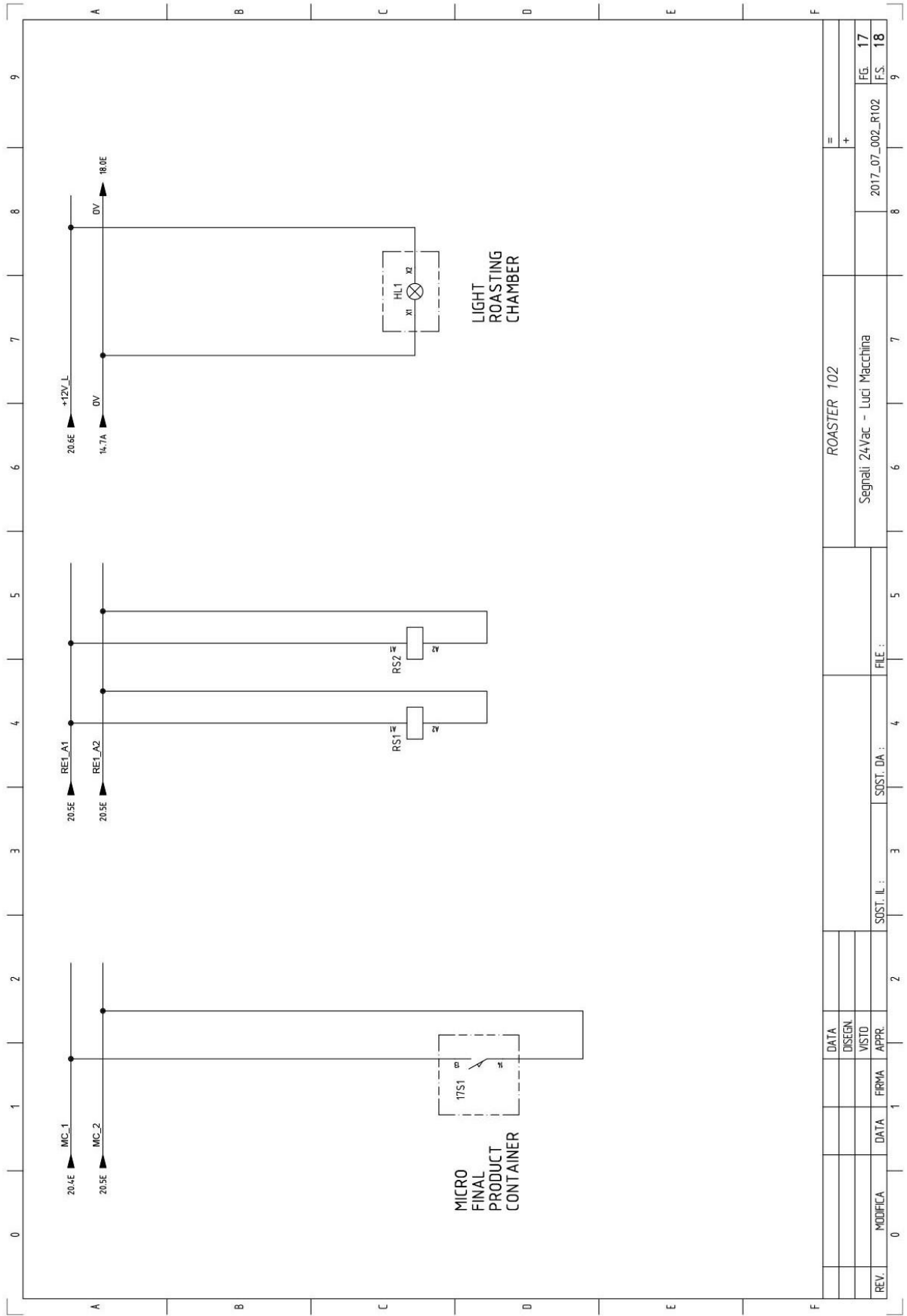




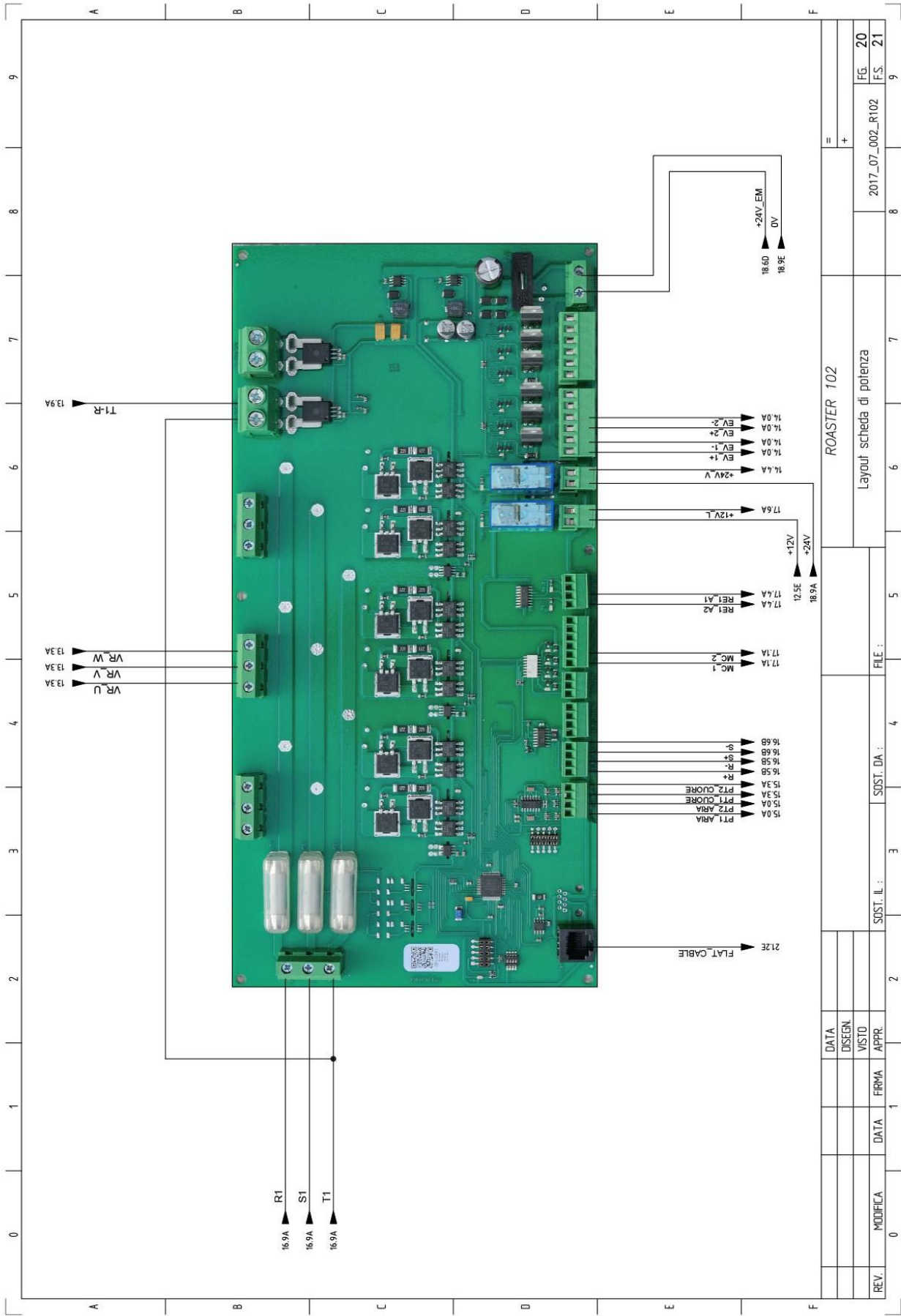


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Inverter											
										8	9
										8	9






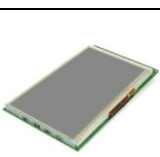









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## 8. Spare parts section

	RST102 001 Emergency button
	RST102 002 START/RESET Button
	RST102 003 Power board
	RST102 004 Display Touch screen
	RST102 005 Flat cable
	RST102 006 General contactor
	RST102 007 Transformer 220 V - 24 V
	RST102 008 Safety module
	RST102 009 Inverter

	RST102 010 Inverter filter
	RST102 011 220V Protection fuse
	RST102 012 Electrical panel cooling fan
	RST102 013 Safety relay
	RST102 014 Security micro electrical panel door
	RST102 015 Roasting chamber light
	RST102 016 Roasting chamber glass
	RST102 017 Blower roasting chamber
	RST102 018 Cooling fan

	RST102 019 Roasting chamber opening piston
	RST102 020 Cooling chamber mixer motor
	RST102 021 Cooling chamber mixer reducer
	RST102 022 Electrical heating
	RST102 023 Manometer
	RST102 024 Solenoid valve group
	RST102 025 Filter
	RST102 026 Swivelling wheels

	RST102 027 Fuses kit
	RST102 028 Temperature probe 6x100 2m long
	RST102 029 Flexible pipe exhaust
	RST102 030 Blower pipe
	RST102 031 Air compressed connection
	RST102 032 Air compressed pipe