ggmgastro

PROOFER / RETARDER
INSTALLATION AND USER MANUAL

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Contents

2 BASIC ISSUES RELATED TO OPERATORS

2.1 The Purpose of This Document

This User Manuel Includes;

- How the machine operates, how it is controlled, and how it is maintained
- It provides information on how to use the machine safely and efficiently.

2.2 Location Information In the User Manual

All directions and location information in this manual arerelated to the operator's work environment.

2.3 Layout of Remarks

2.3.1 Guideliness for system reactions

The procedures that must be performed by the operatorare shown in a numbered list. The procedures must beperformed in order. The reactions shown by the system to an action performed by the operator are marked withan arrow.

Sample:

1) Operator Action - Process 1

→ The system's reaction to operator 1's action

2. Operator Action - Process 2

→ The system's reaction to operator 2's action

2.3.2 Sequence Order

Items that are not subject to a mandatory order are shown in a bulleted list.

Sample:

- Substance 1
- Substance 2

2.4 Symbols and Warnings Explanations

Safety warnings are indicated by a pictogram and a signalword. The signal word indicates the severity of the existinghazard.

DANGER

DANGER: Risk of serious injury or death.

WARNING

Possible danger to the life and health of individuals (serious injuries or death)

ATTENTION

Potentially hazardous situation (minor injuries or material damage)

ATTENTION

This sign requires a specific action or responsibility forsafe control of the machine.

SAFETY INSTRUCTIONS

It includes specific instructions and procedures related to safety.

Note

It contains application recommendations and very usefulinformation.

Suggestion

Energy saving suggestions

Danger

Warning Electrical Hazard

Caution Flammable Material

Attention Suspensed Load

Warning: Danger of Hand Caught

Dikkat Kayma Tehlikesi

Caution When Door Opens Steam/Heat Hazard

Warning Tipping Hazard

Warning Falling Danger

It is Forbidden to put your hand in!

No entry for those not authorized!

Use Protective Gloves

It is forbidden to climb on the machine!

3 INTRODUCTIONS

3.1 Manuel Introductions

This user manual contains the necessary information for the fermentation cabinet to operate without any problems.

It is prepared and intended to support everyone who is authorized to operate the machine. Everyone should carefully read every part of the manual.

After reading this user manual;

You will be able to operate the machine safely, perform maintenance as required, and take necessary precautions in case of any malfunction.

Some considerations;

Store this manual in a safe place where it can be easily found by machine operators or maintenance technicians.Protect it from factors that could cause it to deteriorate over time.

It should be kept for the life of the machine. It should be handed over to subsequent operators of the machine.

Do not attempt to operate the machine without reading this manuel from beginning to end.

This booklet is completely up-to-date at the time of writing.

However, due to continuous improvements in today's technology diversity, the final usage procedures may differ slightly from those described in this manuel. This simply means that the machine has been improved to better meet your needs.

GGM Gastro is not responsible for any problems arising from use outside of its intended purpose.

3.2 Customer Support

3.2.1 Customer Service worldwide

3.2.2 Instructions for requesting technical assistance

GGM Gastro is at your service for any questions you may have regarding the installation, use, and maintenance of the machine. The company will also provide explanations and recommendations to ensure the machine's optimal efficiency.

For repair operations, we always add strength to your strength with well-trained, highly qualified quality personnel and equipment.

3.2.3 After-sales service

The after-sales intervention request must be reported completely, especially with the machine identification plate data, including the serial number.

3.2.4 Instructions for ordering spare parts

Over time, some parts of the machine may need to be replaced due to malfunction or wear and tear.

Original spare parts should always be used to maintain the safety and reliability standards provided by the manufacturer.

The spare parts request should mention the data from the machine identification platform (especially the serial number) and should be sent to the same address as above.

3.2.6 Customer Training

Customer training packages not only enhance the operational performance of production personnel but also develop their basic machine maintenance skills, reducing the pressure on the customer's maintenance team.Training can be provided at our service center or at the customer's own workplace.

3.3 Identification Data of the Manuel

This manual's version and data definition are specified on the inside cover.

This data is required to order further copies of this manual. This user manual contains all the necessary information for the installation, operation, cleaning and maintenance of the machine and its components.

Please take sufficient time to read the operating instructions carefully and completely before operating the machine or its related components.

To ensure safe, correct and economical operation of the equipment, follow and comply with all information and safety instructions given in detail in these operating instructions.

All safety instructions are based on current safety, health and legal regulations applicable at the time of print.

3.3.1 Manuel usage

The manual should be consulted before the first start-up and before installation at the workplace. To ensure correct installation, the manual should be read from the beginning,paying attention to its content until the end.

4 SAFETY

4.1 Basic Issues Related to Safety Warnings

The safety warnings below should be read carefully before starting the machine and these warnings should be followed. These warnings, made for your safety, aim to protect you from dangers and/or injuries.

4.2 Proper Usage

VSONIC V-Belt Rounding Machine, is designed to meet current safety regulations, incorporating the latest technology and intended use at the time of its release. Any use beyond this may result in unforeseen physical damage to the machine.

While preventing such misuse may not be possible, any use other than the intended purposes is consideredmisuse. GGM Gastro company cannot be held responsible for any misuse of the machine. The operator is solelyresponsible for any risks arising from its misuse.

The following items are also within the scope of appropriate use.

- Compliance with examination and maintenance conditions.
- The use of business materials and auxiliaries in accordance with current safety regulations.
- Compliance with anticipated operational and preventive maintenance-repair conditions and consideration of predictable faulty behavior.
- "Only use original parts."

WARNINGS

Warning: Risk of injury.

The machine must only be used for its intended purpose and when all safety precautions are in place.

Only in this way can the safe operation of the machinebe ensured!

4.3 Normally Foreseeable Misuse

Any use that is different from or outside of the"intendeduse" is considered misuse!

Any damage resulting from the use of the machine forpurposes other than its intended use is the responsibility of..

- The operator of the machine
- In such a case, the manufacturer cannot be held liable.

Using the machine for purposes other than its intended use can lead to risks. The following examples are considered misuse:

- Using the machine in an explosive atmosphere
- Exceeding the technical values specified for the normal operation of the machine.

4.4 Conversion and Replacement

- No modifications or additions should be made to the machine.Actions contrary to this rule will invalidate this EC declaration of conformity. The same applies to welding work on carrier parts.
- Defective parts must be replaced immediately.
- Only original spare parts should be used. The specified requirements are only met by these parts.

4.5 Actions to be taken by the Customer

Information on how to make energy connections and regulations is included in the normal plan or installation plan.

The normal plan or installation plan was sent to you before the sales contract was made.

Supply and discharge lines must only be installed by qualified professionals.

The electrical inlet cable and main switch will be installed by the customer. The electrical connection, connection lines and main switch must comply with EN 60204-1/VDE 0113 standard.Gas fume and steam hoods must comply with DIN 18160 and 4705 standards.

4.6 Hazards Thats May Arise When The Working With The Machine

SAFETY INSTRUCTIONS

- Technical power data should not be exceeded.
- All safety and hazard warnings on the machine must be read and kept in good condition and replaced whennecessary.
- The machine must only be operated by personnel who have been trained in the use of the machine.
- In the event of malfunction, the machine must be immediately disabled. The existing fault must be rectified by a suitably trained person.
- The machine's start/stop operations and control indicators must be followed as specified in this use manual.
- The machine must not be operated if there are people within the danger zone.
- All safety systems must be checked individually everyday before starting work with the machine.
- This user manual must be kept where the machine isused..

4.7 Personnel Protective Equipment

SAFETY INSTRUCTIONS

When operating the machine, all necessary personal protective equipment must be used, such as safety work shoes and heat-resistant protective gloves.

Personal protective equipment must be provided by the machine operator and must meet the requirements of the relevant legislation in force.

Furthermore, domestic legislation and, if applicable, the internal instructions of the machine operator must also be followed.

4.8 Machine Safety System

SAFETY INSTRUCTIONS

Safety systems must be installed and operational in their designated locations before each machine startup.

Safety systems:

- They can be removed from their locations after the machine stops and is secured against accidental restart.
- Components of the safety systems provided by us must be installed in their designated locations by the machine installer in accordance with regulations.
- Safety limit switches must not be bypassed.

4.9 Hazards That May Arise Due To Electrical Energy

SAFETY INSTRUCTIONS

- Electrical installations and fixed electrical equipment must be inspected by an electrician at regular intervals in accordance with operating safety regulations.
- If used, non-fixed electrical equipment, plug-in cables,extension cords and device connection cables, together with their plugs, must be inspected by an electrician at least every 6 months using suitable control devices. Control panels and electrical components must be manufactured and inspected in accordance with VDE regulations.
- After delivery of the machine, any work performed on the machine must comply with regulations.
- Work on the control panel and electrical components must only be performed by a qualified electrician.
- All safety systems of the machine must be checked regularly to ensure they are functioning properly.
- Only original insurance policies should be used.
- Regulations on general accidents must be complied with.

4.10 Fire Warnings

SAFETY INSTRUCTIONS

- Burning oil should be extinguished with a CO2 extinguisher or a powder fire extinguisher.
- A fire in the electrical panel should be extinguished with a CO2 extinguisher.
- The fire department should be notified.
- If you suspect something is wrong, you should always consult a doctor.

4.11 Obligations of the Machine Operations

The machine operator;

- Will only employ personnel who have basic knowledge of occupational safety and accident prevention regulations on the machine,
- Have been trained on how to use the machine, have read and understood this user manual (especially the safety and warning sections) and have confirmed this with their signature.
- The company will regularly check if its personnel are working with safety awareness.
- The company undertakes not to employ personnel in repetitive tasks..

4.12 Obligations of Personnel

Everyone assigned to work on the machine, before starting work;

- Undertakes to comply with the basic provisions of occupational safety and accident prevention regulations,
- Undertakes to read the safety section and safety warnings in this user manual and to comply with these warnings.
- You can direct your questions to the manufacturer.

4.13 Education Status of Staff

- Everyone working on the machine must have read, understood, and be familiar with the contents of the user manual and must comply with it.
- The Business manager undertakes to train his personnel in accordance with this user manual, regulations and instructions.
- Assistants and apprentices should only be allowed to work on the machine under the supervision of a skilled worker.
- The authorities of the personnel regarding assembly, commissioning, machine control, maintenance and preventive maintenance should be clearly defined so that there is no misunderstanding.

4.14 Flour Powder and Sugar

SAFETY INSTRUCTIONS

To prevent dangers that may arise from flour dust, measures should be taken at the workplace to minimize the formation of flour dust as much as possible.

- Auxiliary technical equipment should be used (e.g. transfer equipment, dusting systems).
- Prolonged contact with hazardous substances should be avoided.
- These substances should only be used in well-ventilated areas.
- Appropriate measures should be taken to prevent the risk of fire and explosion.
- Personal protective equipment should be used.
- Hazardous substances should never be filled into food containers.
- Never work with a material whose contents and properties are unknown (e.g. smell it).
- Such a container should always be shown to the supervisors and they should be asked what it contains.

4.15 Dangerous Substances

SAFETY INSTRUCTIONS

Dangerous goods are substances and preparations that are toxic, irritant, corrosive, and flammable. Refer to dangerous goods regulations.

For example, surface cleaners, floor care products, and detergents used in dishwashing, cleaning of appliances or machines may contain dangerous goods.

Work involving the release of harmful gases, vapors, mists, or dusts in dangerous quantities shall be carried out in closed apparatus or, if this is technically impossible or not feasible, such harmful gases, mists, or dusts shall be safely vacuumed up as they are formed or at the point where they are released.

The precautions to be taken when working with suchhazardous substances are as follows::

4.16 Risks That May Occur While Working with the Machine

SAFETY INSTRUCTIONS

The risks and negative consequences that may arise during the use of the machine are as follows:

- Physical and vital risks and negative consequences that may arise for the operator or third parties,
- Risks and negative consequences that may arise in the machine,
- Risks and negative consequences that may arise for other material assets.
- The safe and trouble-free operation of the machine depends on knowing and complying with the safety and user warnings contained in this manual.

Note

This user manual must be kept at the location where the machine is used.

This user manual must be available at all times to the machine operator and maintenance personnel.

Additionaly, the provisions of general and local accident prevention and enviromental protection legislation must also be followed.

4.17 Residual Risks

- This machine has been manufactured in accordance with the current state of technology and in compliance with accepted safety regulations.
- Please read these warnings before commissioning the machine.
- Residual risks within the scope of the EC Machinery Directive.
- When connections are made correctly and the machine is used correctly, it does not pose any danger to personnel during operation. Individual points may be dangerous when checking the machine's functions or during cleaning operations, e.g. with covers open.

DANGER

Residual energies remaining in systems can cause injuries. In addition to the precautions specified by the manufacturer against risks that may arise from residual energies, additional precautions should be taken by the operator of the machine. Personnel should be informed about these risks and the precautions to be taken during training.

4.17 Dangerous Points

SAFETY INSTRUCTIONS

Be careful when opening the control panel!

- The electrical control panel should only be opened by a qualified person, e.g. for maintenance work.
- Before opening the panel, the main switch must be switched off and secured against being switched on again. The control panel should be kept closed at all other times..

Be careful when performing maintenance and repair work!

- The machine main switch, which will be provided by the customer, must be kept off during maintenance or repair work and secured against accidental switching on.
- Safety systems must not be manipulated or disabled in any way.
- Sheet metal covers, trims, etc. should only be opened for maintenance and preventive maintenance-repair work. The machine must not be operated without these covers and trims in place.

The protective grid located in the drive section.

- Protective covers are provided in the drive section to protect against accidents. These covers must remain closed while the machine is running..

Parts containing voltage can be dangerous.

4.18 Warning on the Machine

Attention: Danger of electrical voltage!

4.19 Hazard Warnings for the Machine

General safety and hazard warnings, as well as dangerous points to consider when operating the machine, are explained.

The safety systems should be checked to ensure they are functioning properly before operating the machine for the first time each day.

ATTENTION

- Wear protective gloves.
- Check the machine control level.
- The machine must not be operated with the key inserted.
- The safety limit switch must not be removed or bridged.

5 FUNCTIONS OF THE MACHİNE

5.1 Area of Usage

This machine is designed for industrial storage of croissants and similar doughs for a specific period, preparing carefully crafted pastries for baking, and automatically executing storage, freezing, and fermentation processes within a single machine during this preparation stage.

5.2 Working Principle

Retarder / proofer

- Provides heating, cooling, and desired humidity levels for raising products.
- A fan located on the cooling unit circulates air to achieve the values set by the operator during automatic or manual operation.
- This circulation ensures even distribution and balance of temperature and humidity within the machine.
- A one-horsepower cooling unit is used for cooling.
- A two-horsepower main resistance is used to reach the desired fermentation temperature or to maintain a balanced ambient temperature during cooling.
- A half-horsepower steam resistance increases humidity within the machine during automatic or manual operation, and a high-precision humidity sensor measures the achieved humidity.
- The compressor in the cooling unit reduces humidity inside the machine if it exceeds the permissible level.

6 TRANSPORTATION AND STORAGE

6.1 Transporation Considerations

The machine will be delivered to the customer by an authorized shipping company.

The customer must inspect the machine for any visible shipping damage upon delivery.

Any shipping damage found must be reported to the relevant carrier and GGM Gastro.

6.2 Transporation Notices

When transporting the machine, extreme care must be taken to avoid damage caused by force or careless loading/ unloading.

Depending on the method and duration of transport, the machine may be delivered on pallets if necessary. In such cases, appropriate transport securing systems are used.

ATTENTION

Extreme attencion should be taken when transporting the machine to prevent damage caused by forceful or careless loading and unloading.
Depending on the method and duration of transportation, it may be delivered on pallets.
In such cases, appropriate transport safety systems are used.

6.3 Things to Consider When Transporting with a Forklift

When transporting, do not allow anyone to climb on or go under the load.

When transporting, move the load as slowly as possible.

When lifting a load, be careful to lift from the center of gravity.

6.4 Indermediate Storage

The machine, if not being installed upon delivery, should be stored carefully in a protected area.

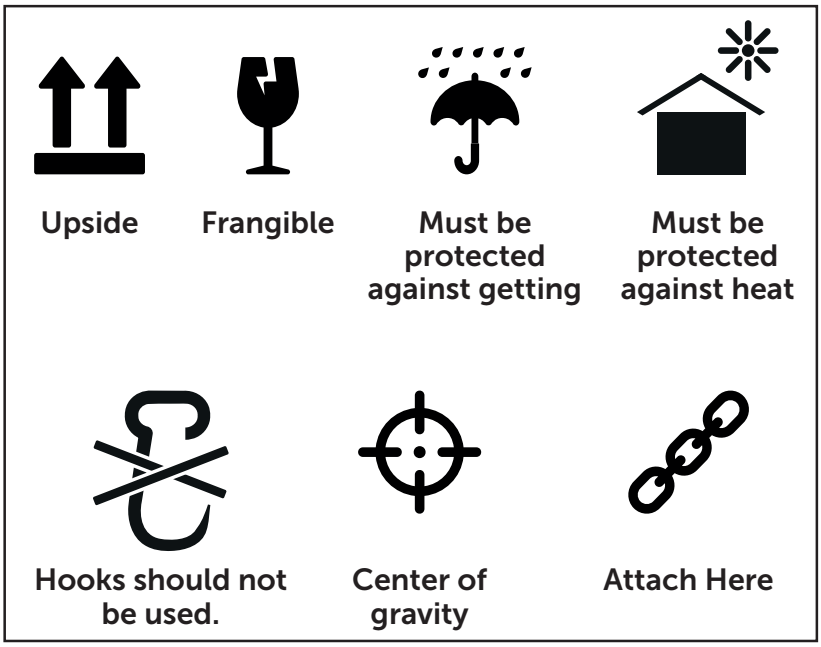
Note

Our company cannot be held responsible for damages that may occur due to improper storage of the machine.

6.5 Ambalaj

The packaging of the machine is determined by the distance of transportation. Unless otherwise specified in the contract, packaging is carried out in accordance with HPE directives , using wooden transport vehicles, pallets.

- The signs on the packaging must be followed.



6.6 Packaging Dimensions

Dimensions for;

Witdh: 100 cm **Length:** 115 cm **Height::** 230 cm

6.7 Packaging Materials

The packaging used in the transportation and protection of the machine is mainly composed of the following recyclable materials:

- Polyethylene film (transparent)
- Pressed chipboard
- Untreated wood

Note

Please do not throw the packaging in the regular trash. You can find out where to dispose of the packaging by contacting your local municipality.

7 TECHNICAL DETAILS

7.1 Machine Technical Specifications

		GAM6040
Tray Capacity		20 x (60x40cm)
Working Temperature	C°	-10 / +40
Cooling Power	kw	0.75
Control System		TOUCH PANEL
Power Supply		220V / 50-60Hz
Electrical Power	kw	2
Cooling Gas		R290A
Isulation	mm	50
Weight	kg	450
Exterior Dimensions	cm	W: 90 L: 112 H: 215

Standard Features

- Industrial PLC controlled
- Compatible with Industry 4.0
- High precision temperature and humidity measurement
- Automatic operation according to adjustable date and time, as well as manual operation for both cooling and fermentation
- Saves time and labor
- Completes the fermentation process at the designated time
- Provides dough production on demand
- Accurate temperature, humidity and yeast control
- Compact and robust cabinet design
- Audible and visual warning signals
- High quality compressor
- Excellent insulation and air circulation

ggmgastro

Proofer / Retarder

8 ASSEMBLY

8.1 Installation Place and Place of Use

ATTENTION

After selecting the installation location, at least 1 meter of space or movement area should be left around the machine, considering the space required for machine control and maintenance work.

8.2 Installation Location Requirements

The following requirements must be met for the machine to operate smoothly and continuously:

- The floor must be flat.
- The load capacity of the floor must be checked. The weight of your machine is specified in the machine plan or user manual that is sent with it.

8.3 Requirements to be fulfille d by the Customer

- This machine requires water to be installed.
- A single-phase socket is needed for the supply cable.
- More detailed information on this topic is included in the installation plan.

8.4 Installation of the Machine

- The machine does not require a special foundation.
- The machine can be installed on a normal floor.

ATTENTION

Pay attention to the necessary distances around the machine.

- Approximately 1 meter of free space should be left around the machine for cleaning and maintenance work.
- Electrical supply cables and fuses should only be installed by a qualified electrician. (see Circuit Diagram)

- VDE regulations and the requirements of local energy distribution companies must be observed.
- Regulations in force abroad must be observed.
- For repair work or in case of malfunctions, it is recommended to install a switch in the machine room that can be locked in an emergency to prevent the machine from being accidentally restarted.

Note

If the assembly personnel is provided by the machine operator, the personnel assigned by the operator must strictly comply with GGM Gastro's instructions for the machine to operate flawlessly and precisely.

The safety warnings in this user manual regarding machine assembly must be followed.

8.5 Electrical Connections

- The network voltage should be checked before connecting the machine to ensure that it complies with the values specified on the type plate.
- The machine wiring is ready for connection.
- The machine's circuit diagrams are inside the control panel..

ATTENTION

ATTENTION: Before connecting the machine, verify the network voltage against the values specified on the nameplate. The machine wiring is prepared for connection. The machine's circuit diagrams are located inside the

9 CONTROL PANEL AND TOUCH SCREEN

9.1 Control Panel

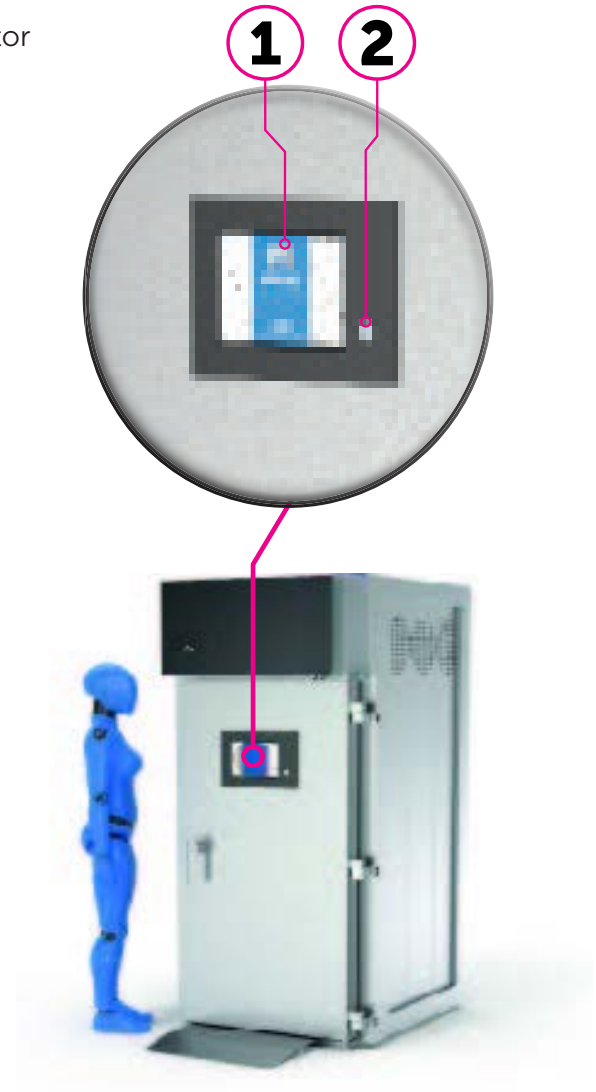
All machine controls can be accessed from the touch HMI screen on the main control panel. Additionally, there are physical buttons, an emergency stop, and various other buttons located in different parts of the machine.

Note

The control panel may vary depending on the machine's hardware.

The buttons on this panel are explained below::

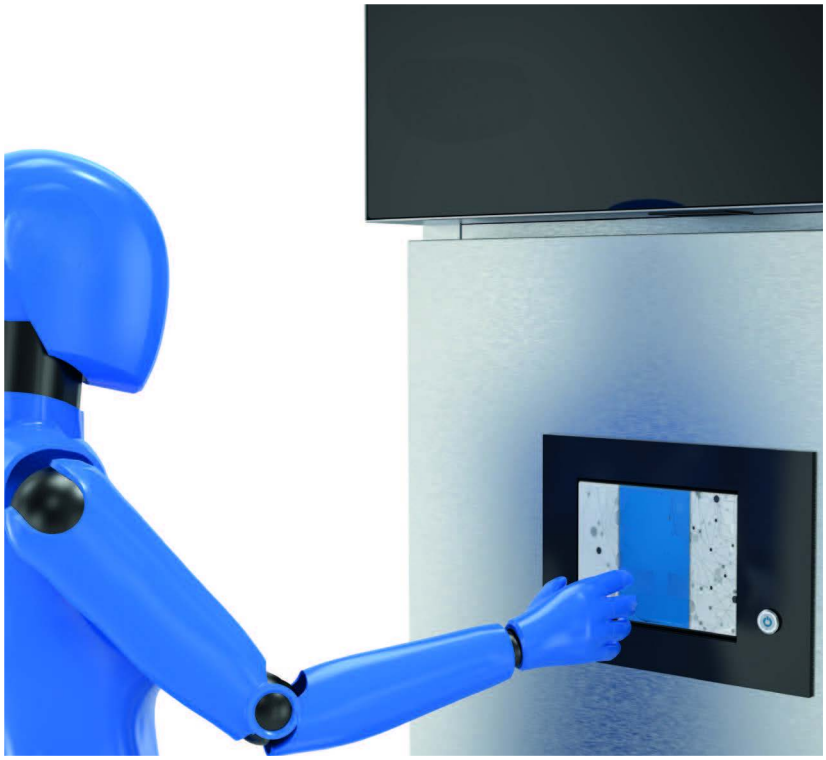
1. Touch PLC supported HMI touch screen computer.
2. Status indicator



9.2 Touch Screen

Through the PLC-supported HMI computer touch screen on the machine:

- All functions of the line can be controlled.
- All parameters and values can be changed.
- Recipes can be created..



ATTENTION

The touch screen on the control panel should only be used with fingers or a stylus. Never use sharp or pointed objects on the touch surface to avoid damage. It should be protected from liquid contact and chemicals.

Note

The machine software always displays the latest formulas and notifications.

The automation software and its appearance may vary depending on the customer's specific system

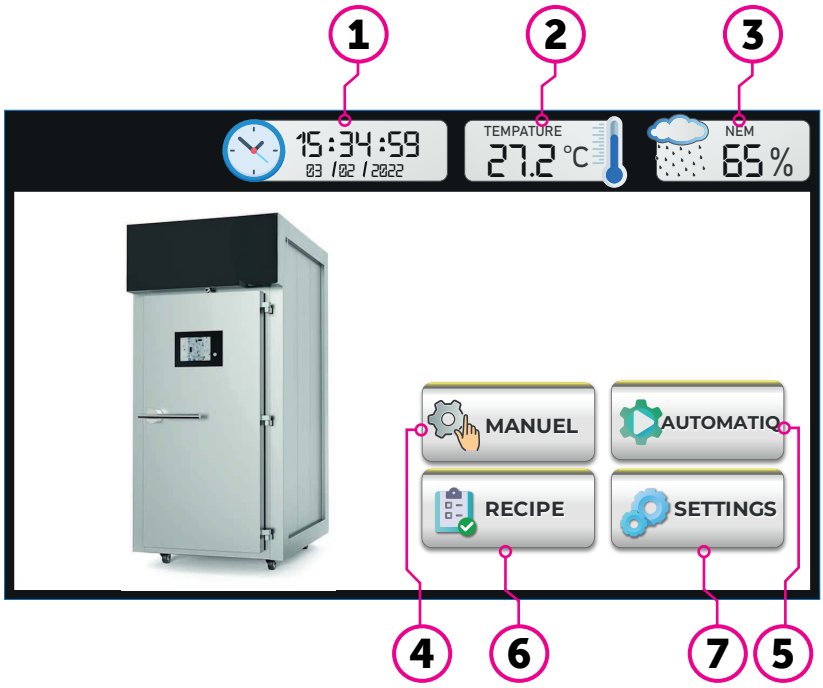
9.3 Machine Start-up

The machine is turned on by pressing the “On/Off Button”, which also activates the touch screen. To turn it off, press the button again.

The system starts by tapping the screen 1.

9.4 Touch Screen Usage

9.4.1 Home Page



3. **Date and Time:** Displays the actual date and time on the main menu screen.
4. **Temperature:** Shows the current temperature of the environment where the product will be located inside the machine.
5. **Humidity:** Shows the current humidity value of the environment where the product will be located inside the machine.
6. **Manual Operation Page:** Directs to the screen with manual heating and manual cooling options.
7. **Automatic Operation Page:** Directs to the screen with the temperature, humidity, and time settings required to run in automatic program.
8. **Recipe Page:** Directs to the screen for creating and editing recipes.
9. **Settings Page:** Directs to the screen where the necessary parameters and settings for the machine to operate correctly are made.

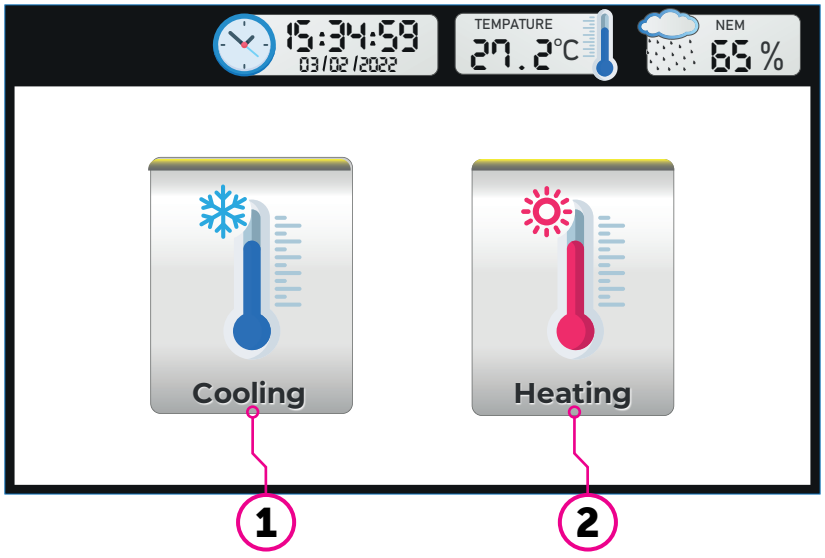
9.4.2 Manuel Page Usage

On this page,
There are cooling and heating buttons. These buttons are used separately to manually operate the cooling unit and fermentation.

This page is generally used:

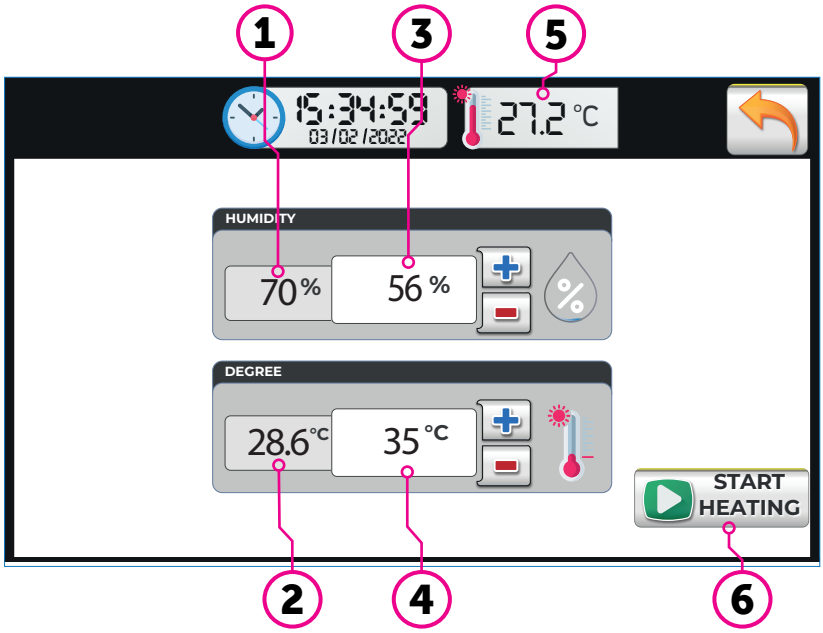
- Before automatic use
- After automatic use

It is used to turn the cooling and fermentation process on and off when necessary.



1. **Manual Cooling Page:** Redirects to the manual cooling page.

2. **Manual Heating Page:** Redirects to the manual heating page.



1. **Instant Humidity Value:** Shows the current humidity value and changes in the environment where the product is located inside the machine.

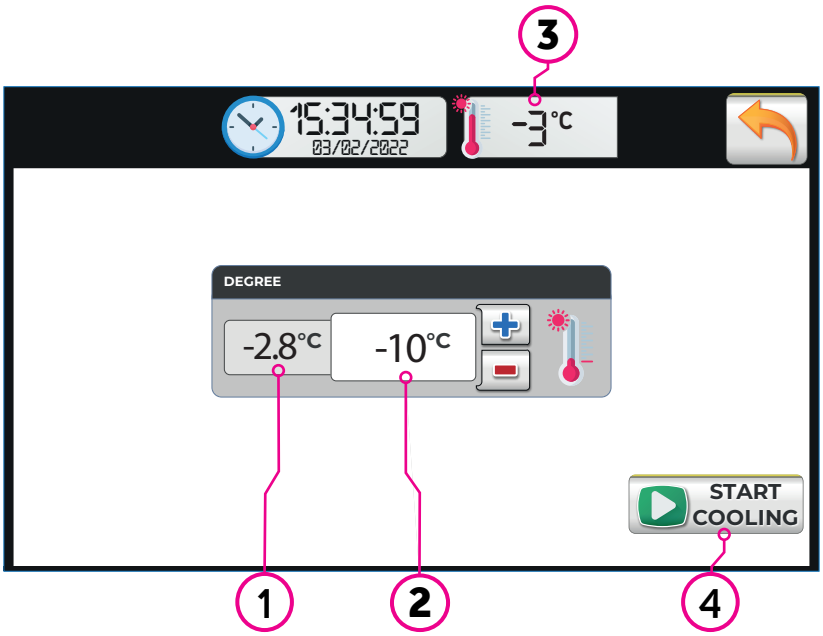
2. **Instant Temperature Value:** Shows the current temperature value and changes in the environment where the product is located inside the machine.

3. **Humidity Adjustment Value:** This is the input for adjusting the highest desired humidity value for the environment during manual heating (If humidity is not desired in the environment, the set value should be entered as zero).

4. **Temperature Adjustment Value:** This is the input for adjusting the highest desired temperature value for the environment during manual heating.

5. **Safety Temperature:** Shows the current temperature of the resistance used to heat the environment during manual heating. It is for safety purposes and has no relation to the temperature of the environment.

6. **Heating Start Button:** This is the start button for manual heating. It is operated by holding the button down to start and stop the process to prevent accidental changes in the start and stop operation.



1. **Instant Temperature Value:** Shows the current temperature value and changes in the environment where the product is located inside the machine during cooling.
2. **Desired Temperature Value Input:** This is the input for the minimum temperature value that the machine's environment temperature is desired to reach during cooling.
3. **Evaporator Temperature Value:** This is the temperature value of the cooling unit during manual cooling. It has no relation to the temperature of the environment..
4. **Cooling Start Button:** This is the start button for manual cooling. It is operated by holding the button down to start and stop the process to prevent accidental changes in the start and stop operation

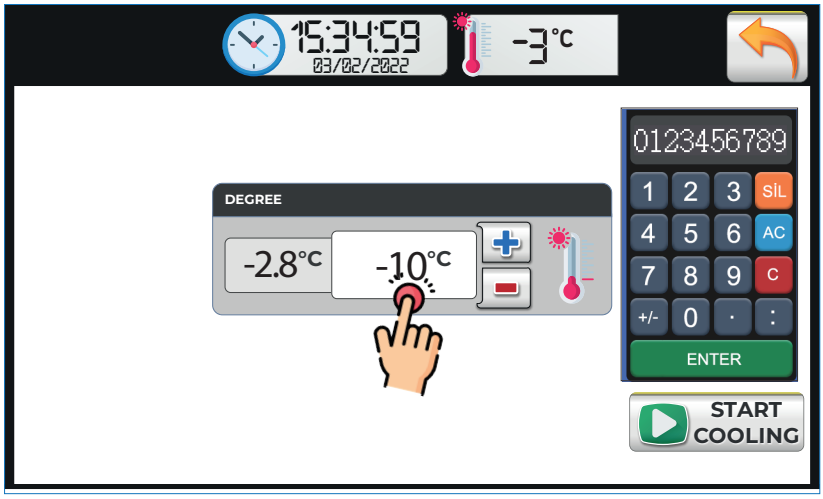
Note

To increase the desired temperature value by1 degree press this button, 

To decrease  press this button.

To increase the desired temperature value by 1 degree, press the button.

9.4.3 Numerator Usage



The desired temperature value can be entered manually.

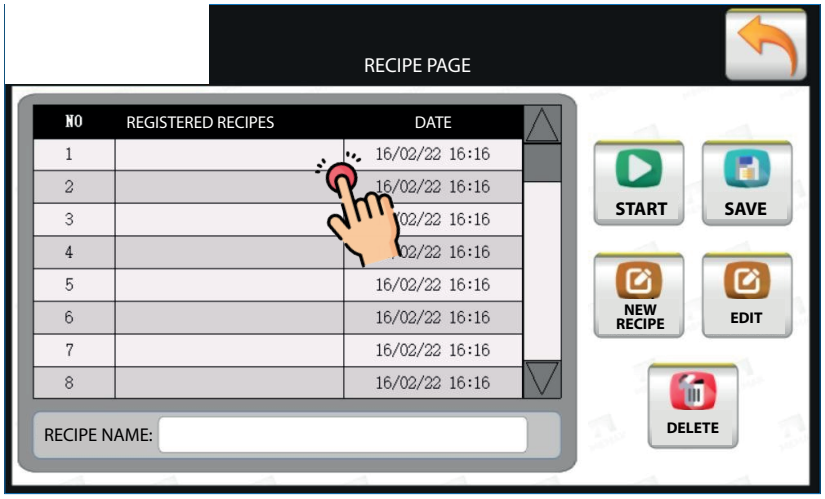
Click on the numerical field and enter the desired value from the keypad that appears on the screen and press the ''ENTER'' key. If you want to set a temperature value below zero press the ''-'' key and shet the desired value below zero press the ''ENTER'' key to save the temperature value you want to use for manual cooling to the desired temperature setting section.

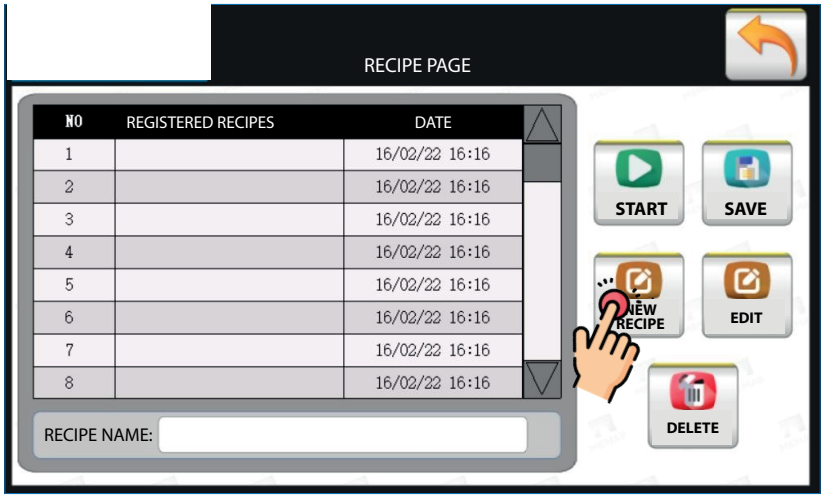
9.4.4 Recipe Page

You can enter the  "Recipe Page" clicking on it in the main menu.

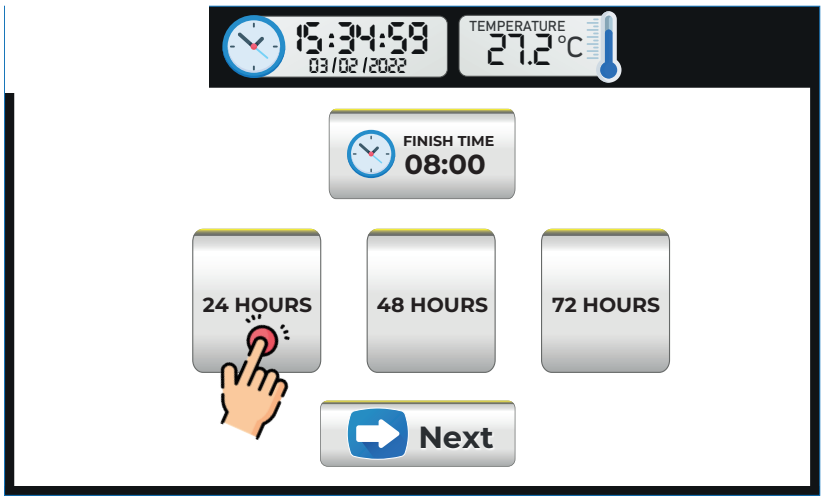
On this page:

- If you have access permission) You can create and edit recipe.
- Previously created recipe can be loaded.
- (If you have access permission) recipe can be deleted..





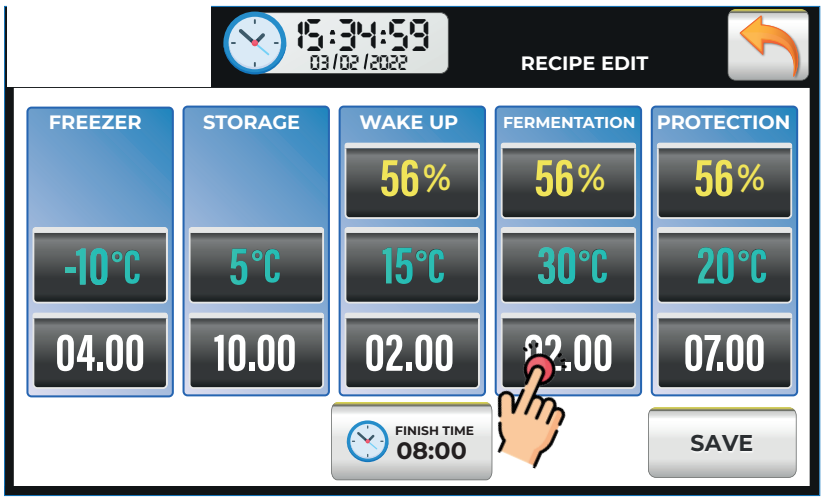
- To create a new prescription, press the NEW RECIPE button as shown and follow the steps for creating a new recipe in order.



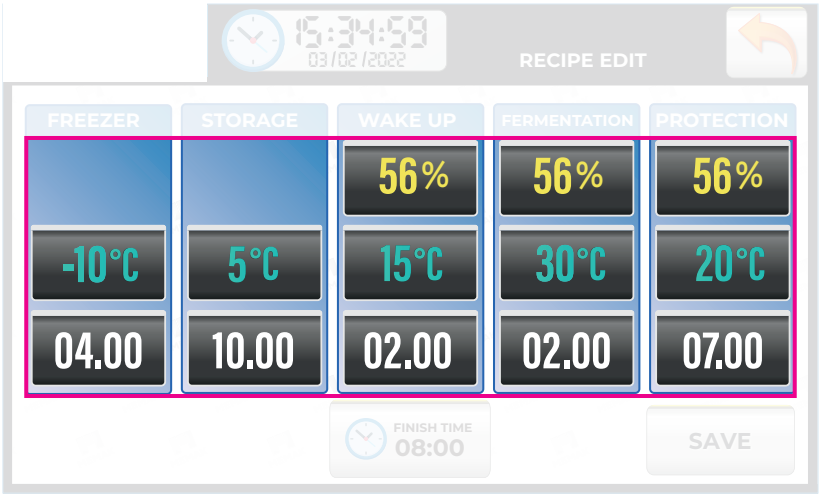
- The first step in creating a new recipe is to determine the end time. After the end time is determined, the time interval in which the desired recipe will be used is determined.
- **24 Hours:** Used for products that are desired to be ready for the next day, it is a daily program.

  48 Hours: Used for products that are desired to be ready within a 48-hour time frame, it is a two-day program.

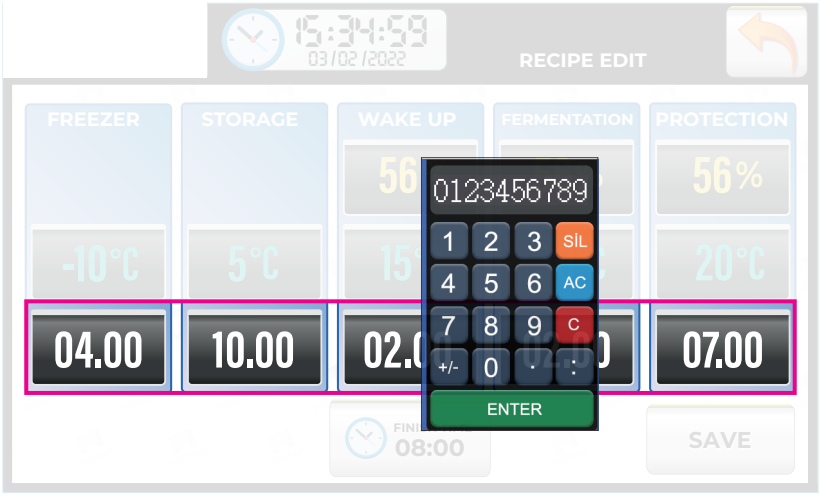
  72 Hours: Used for products that are desired to be ready within a 72-hour time frame, it is a three-day program.
- After the daily program is selected, the “NEXT” button is pressed to proceed to the next step



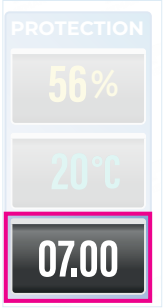
- This step involves setting the humidity, temperature, and duration settings required for the recipe.



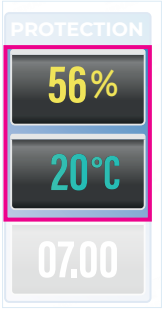
- In this step, the white values on the touch screen represent the time and duration, the blue values represent the desired temperatures for different steps during automatic operation, and the yellow values represent the desired humidity values for different steps.



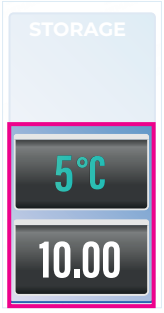
- This screen allows you to individually adjust the desired temperature, humidity, time, and duration for each step: freezing, storage, waking, leavening, and preservation.



- The white time value under the “PRESERVATION” heading represents the end time set in the previous step. This value is not the duration set specifically for the “ PRESERVATION” process..

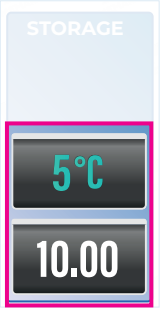


- The RECIPE process is designed to maintain the product inside the machine at the desired humidity and temperature values set under the same heading, starting from the end time specified in the machine's automatic recipe, until the automatic operation is stopped..

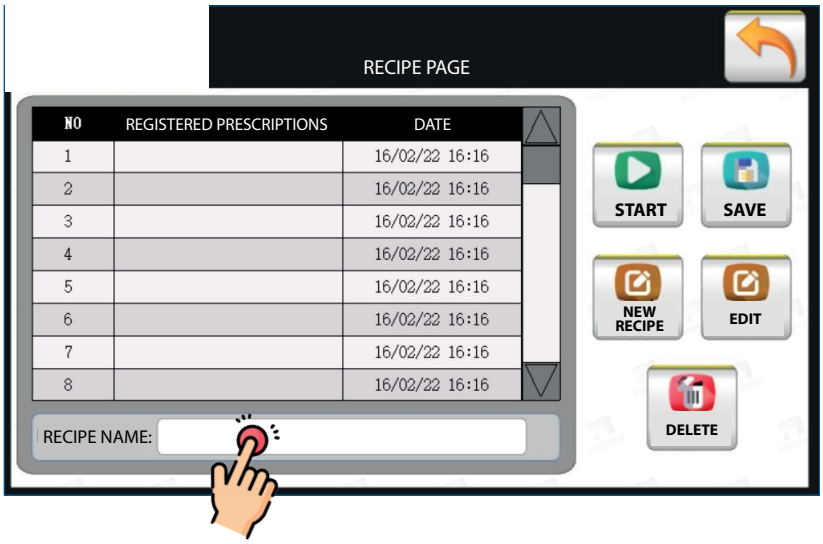


- In a 24-hour (one-day) running program, the desired durations for the freezing, waking up, and fermenting steps are recorded by clicking on the white values under these selector. Only the duration under the "STORAGE" heading is calculated by the program itself and cannot be changed. This value automatically changes based on the actual time when the durations of the freezing, waking up, and fermenting steps ated. Headings and using the subsequent number

- For 48-hour (two-day) and 72-hour (three-day) automatic programs, the explanation mentioned in the previous paragraph applies to the "REVIVING" and " FERMENTING" steps. However, the explanation given for the "STORAGE" process in the previous paragraph applies to the "FREEZING" step in these programs.



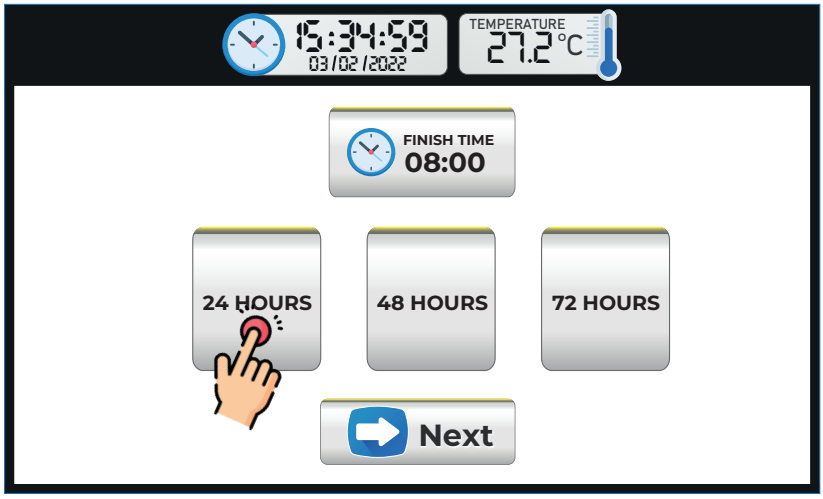
- Once you've entered the required time and ingredients for the recipe, clicking the "SAVE" button will redirect you to the "RECIPE LIST" page.



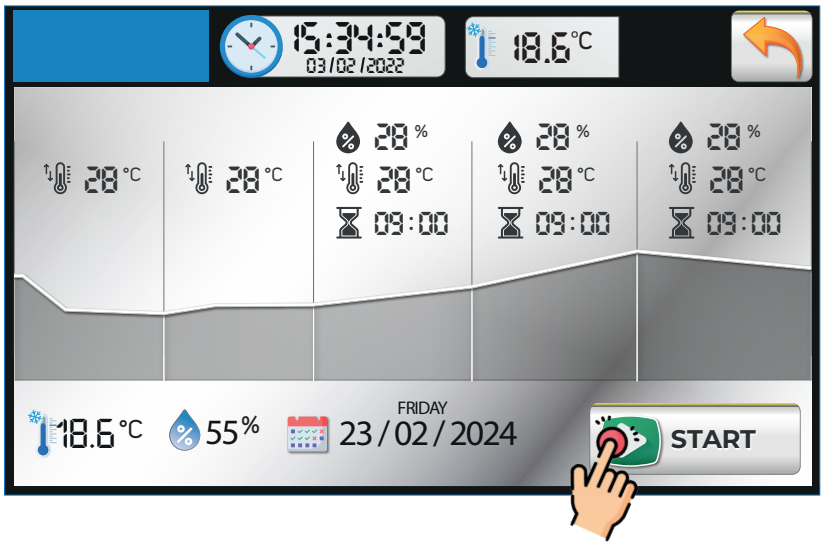
- After entering the required duration and values for the new recipe, the recipe name is determined by clicking on the blank space shown in the screen and using the keyboard that will appear on the screen.
- After the prescription name is determined, the recipe is saved by pressing the SAVE button and the new recipe creation process is completed.
- In the screen shown in the figure, previously saved recipe are used by pressing the RUN button, edited by pressing the EDIT button, and deleted by pressing the DELETE button in the desired situations.

9.4.5 Automatic Usage Page

- If the machine does not work with the previously saved recipe, an automatic program can be prepared by pressing the “AUTOMATIC” button and selecting and adjusting the desired values.



- The steps for adjusting the automatic work program are the same as the process for creating a new recipe (page 83).

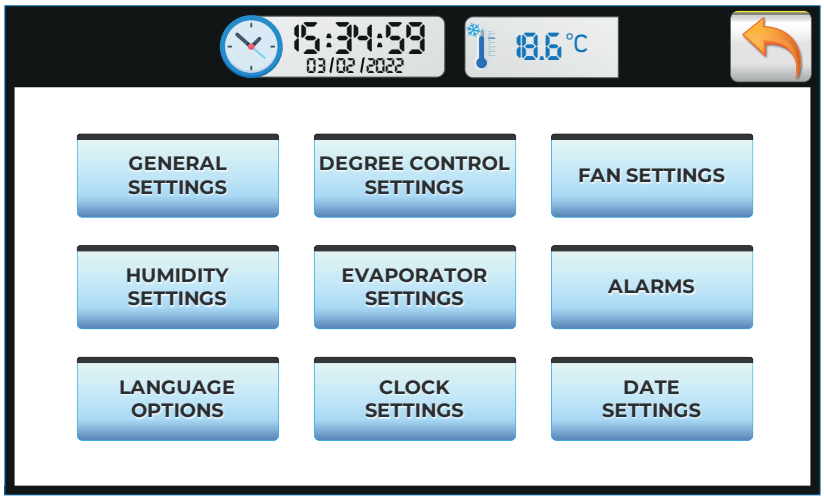


- Once the necessary values for the automatic work program are saved, the screen program redirects to the page shown in the figure. This page displays the end date and time of the set program, the current humidity and temperature values, the program’s steps (freezing, storage, waking up, fermentation, and protection), the saved values, and the duration of operation.

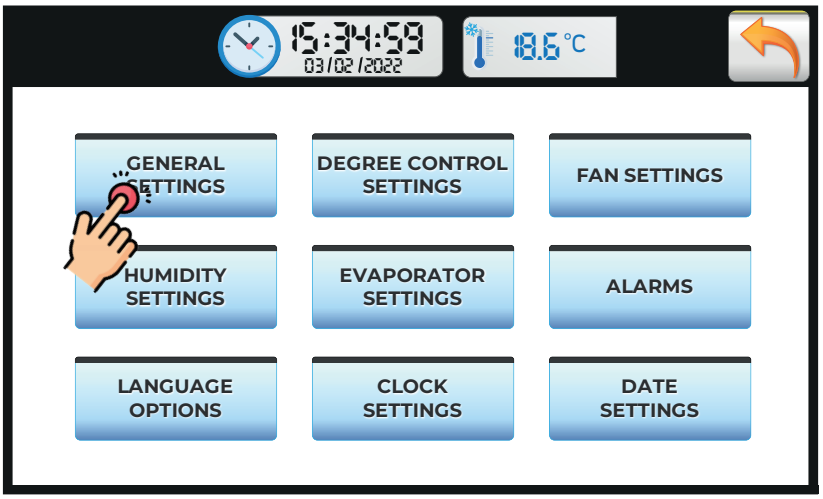
- The automatic program is run by holding down the “START” button on the same screen. The screen only changes to show the steps of the program’s current stage until the process is complete.
- When the automatic program’s duration is complete, a warning appears on the screen, but the machine continues to operate in the “PROTECTION” stage to preserve the product inside unless the program is stopped.
- To stop the automatic program, hold down the “STOP” button to terminate the automatic program.
- The values saved and edited for the automatic program remain the same in the machine’s memory unless any changes are made.

9.4.6 Settings

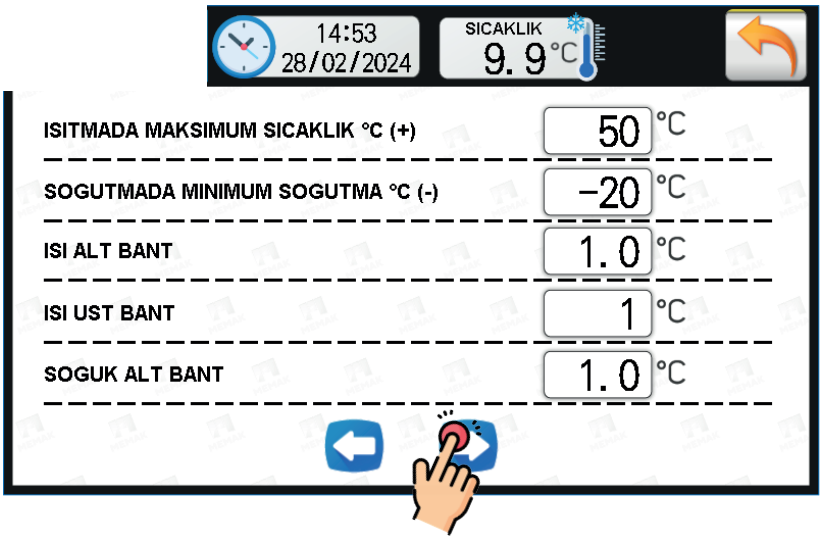
This page allows you to configure all of the machine’s settings.



9.4.7 General Settings



This page allows you to make general machine settings and some security adjustments. Necessary adjustments are made during machine testing.



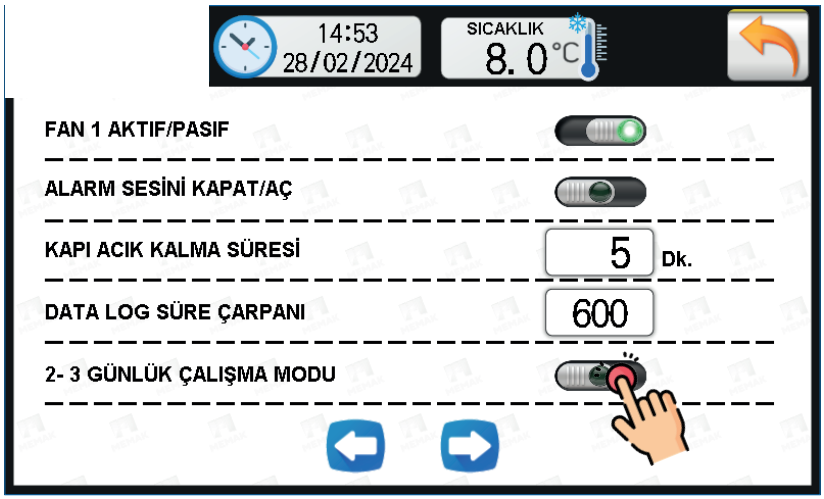
Maximum Heating Temperature: The highest temperature value that can be written for automatic and manual heating operations..

Minimum Cooling Temperature: The lowest temperature value that can be written for automatic and manual cooling operations.

Heating Lower Band: The difference between the set temperature value and the temperature value at which heating will stop to ensure that the set temperature values for automatic and manual heating operations remain within the desired values..

Heat Upper Band: The difference between the set temperature value and the temperature value at which heating will be activated to ensure that the set temperature values for automatic and manual heating operations remain at the desired

Cold Lower Band: r Band: The difference between the set temperature value and the temperature value at which cooling will be stopped to ensure that the set temperature values for automatic and manual cooling operations remain at the desired values.



Fan 1 Active/Passive: ed to turn the fan on/off, which circulates air inside the machine and is located on the cooling block.

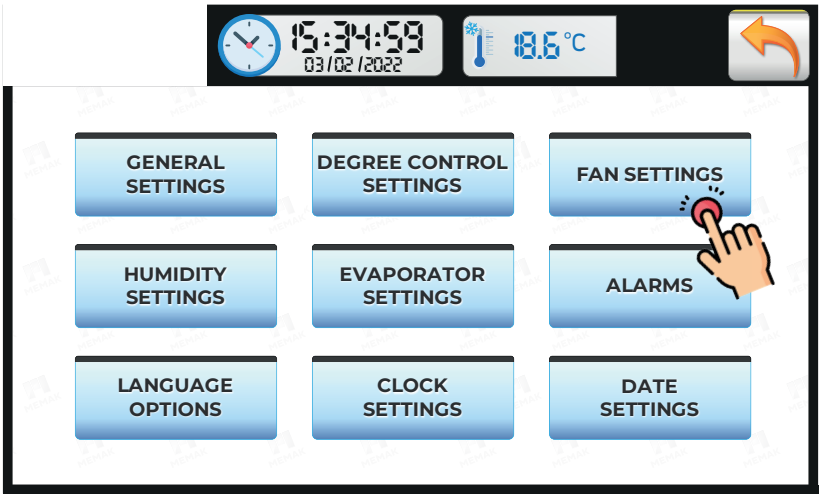
Alarm Sound On/Off: Used to turn the warning alert on/off, which will sound in alarm situations.

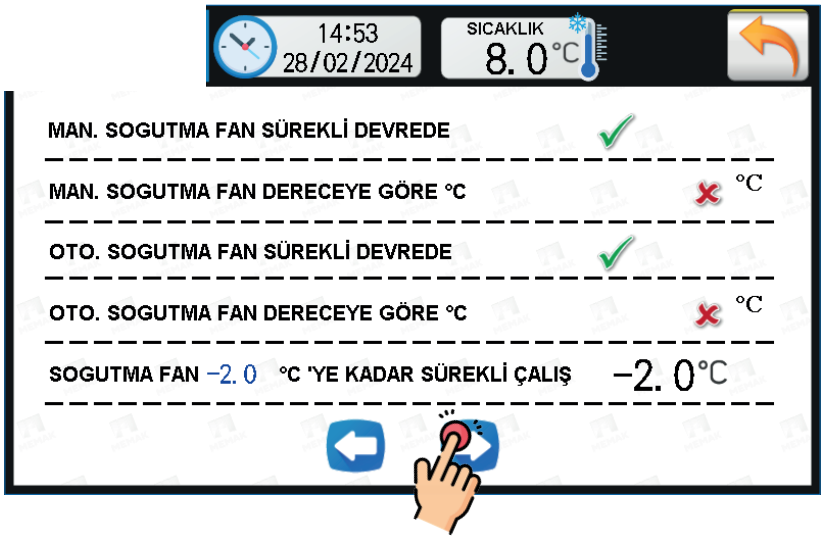
Door Open Stay Time: The amount of time the heating, cooling, and fan equipment will continue to operate after the door is opened.

2-3 Day Operation Mode: Provides the option of 48 and 72 hour work programs in addition to the 24 hour program in automatic operation.

Safety Thermostat Degree: Indicates the maximum temperature the main heater, responsible for raising the internal temperature, can reach. If this limit is exceeded, the machine will trigger an alarm, stop heating automatically, and switch to cooling mode.

9.4.8 Fan Settings



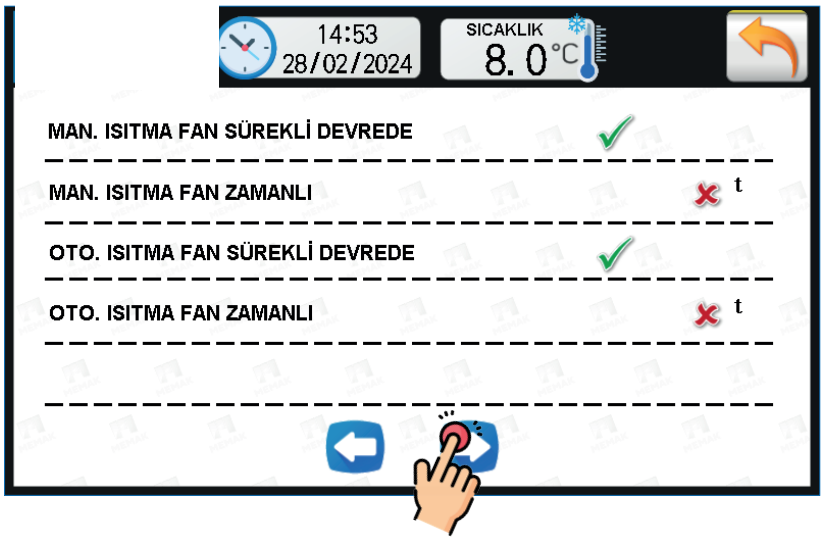


Manual Cooling Fan Always On: Keeps the circulation fan running constantly during manual cooling.

Manual Cooling Fan Temperature Dependent: Turns the circulation fan on or off based on temperature during manual cooling.

Automatic Cooling Fan Always On: Keeps the circulation fan running constantly during automatic cooling.

Automatic Cooling Fan Temperature Dependent: Turns the circulation fan on or off based on temperature during automatic cooling.

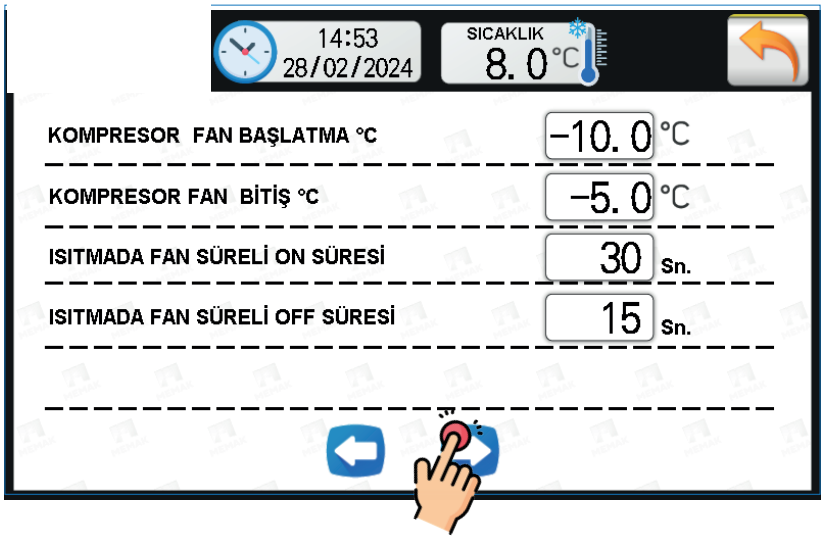


Manual Heating Fan Continuous: Used to keep the circulation fan on or off continuously during manual heating.

Manual Heating Fan Timed: Used to keep the circulation fan on or off based on temperature during manual heating.

Automatic Heating Fan Continuous: Used to keep the circulation fan on or off continuously during automatic heating.

Automatic Heating Fan Timed: Used to keep the circulation fan on or off based on temperature during automatic heating.



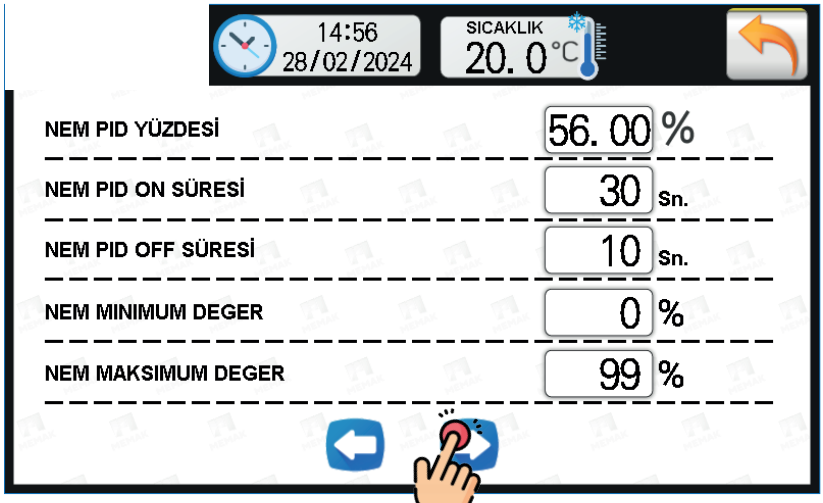
Compressor Fan Start: The desired temperature value for the circulation fan to start when the fan setting is temperature-dependent.

Compressor Fan End: The desired temperature value for the circulation fan to stop when the fan setting is temperature-dependent.

Heating Fan On Time: The duration of the circulation fan operation when the fan setting is temperature-dependent.

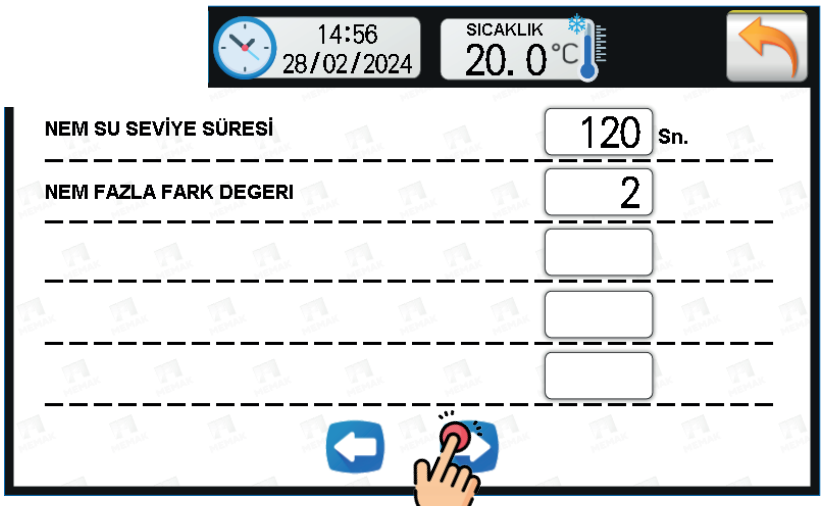
Heating Fan Off Time: The duration of the circulation fan stop when the fan setting is temperature-dependent..

9.4.9 Humidity Settings



Minimum Humidity Value: This is the minimum humidity value that can be requested during automatic and manual heating.

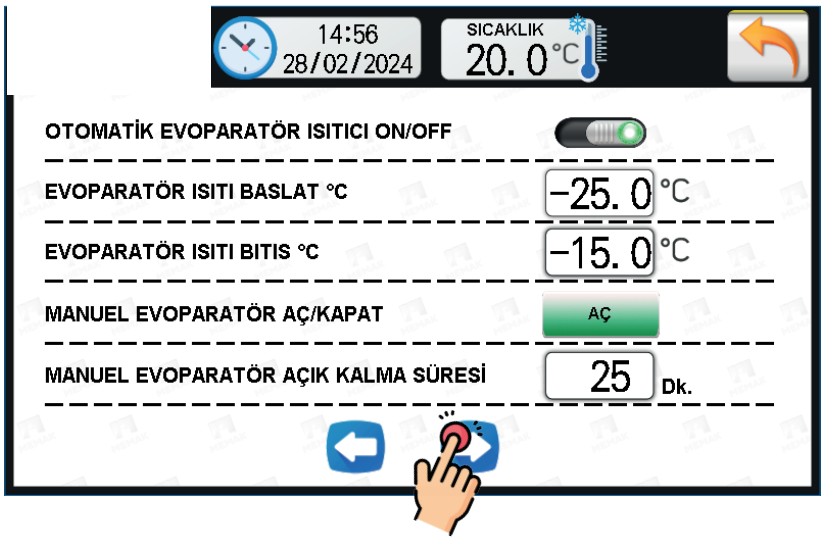
Maximum Humidity Value: This is the maximum humidity value that can be requested during automatic and manual heating.



Humidity Level Duration: This is the time it takes for the water to fill the water tank inside the machine when humidity is requested in both automatic and manual operation modes. This is to cut off the water supply (a second safety measure besides the liquid level relay).

Humidity Excess Difference Value: This is the difference between the desired humidity value and the humidity value at which the water heater will be shut off in both automatic and manual operation modes.

9.4.10 Evaporator Settings



Automatic Evaporator Heater On/Off: This setting allows you to automatically turn on or off the heater located inside the cooling block during automatic or manual cooling within the set range of values.

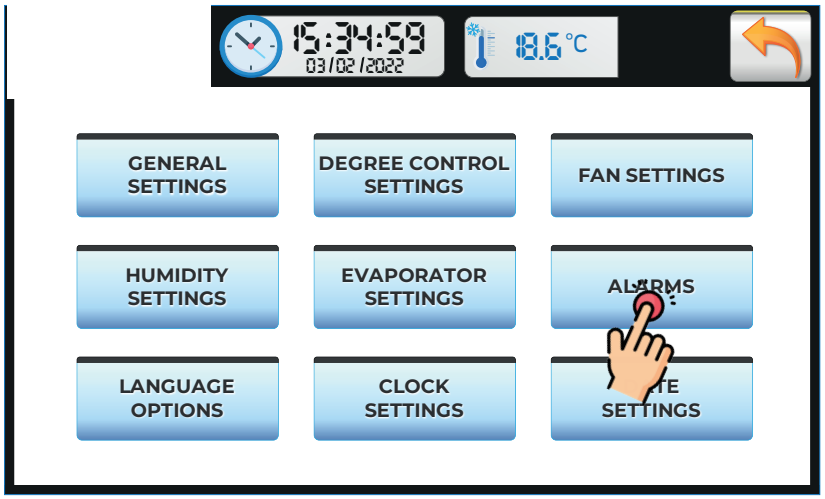
Evaporator Heater Start: This is the temperature setting required for the automatic evaporator heater to start working.

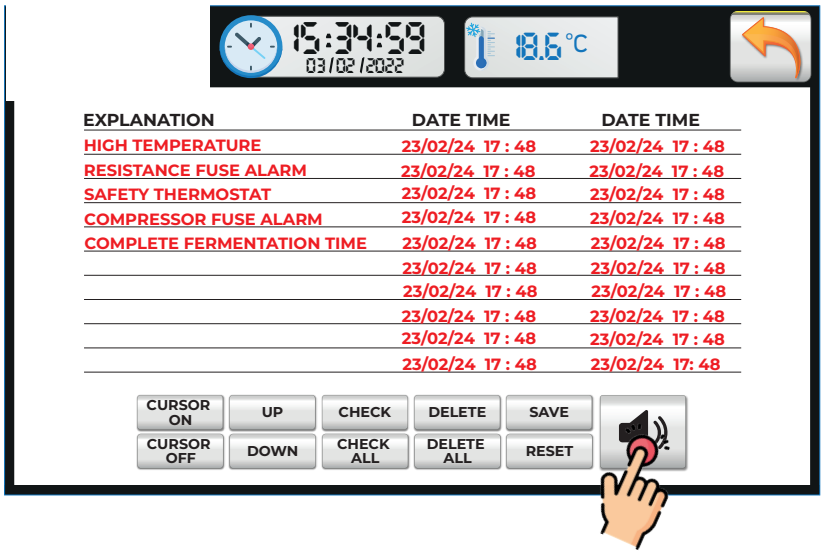
Evaporator Heater End: This is the temperature setting required for the automatic evaporator heater to stop working.

Manual Evaporator On/Off: This allows you to manually turn on or off the heater in case the temperature of the evaporator falls below the set value while the cooling block is running.

Manual Evaporator On Time: This is the desired duration for the manually operated evaporator heater to run. After this time, the manual heater will automatically shut off.

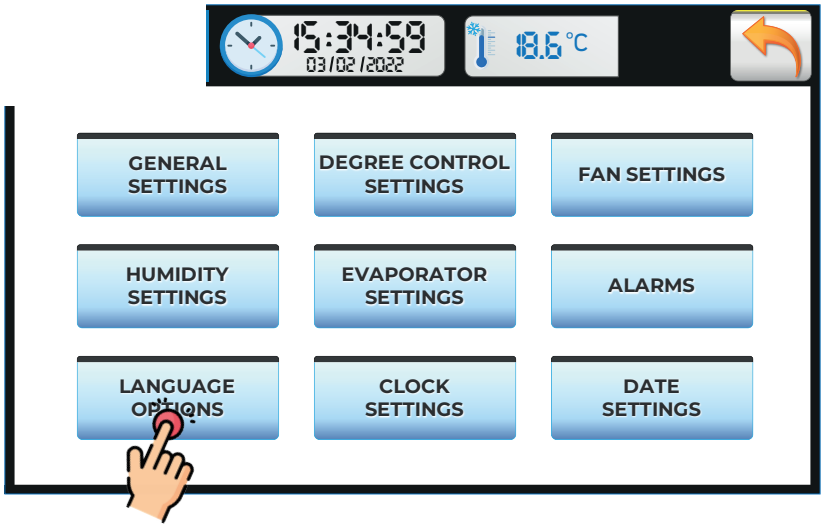
9.4.11 Alarms

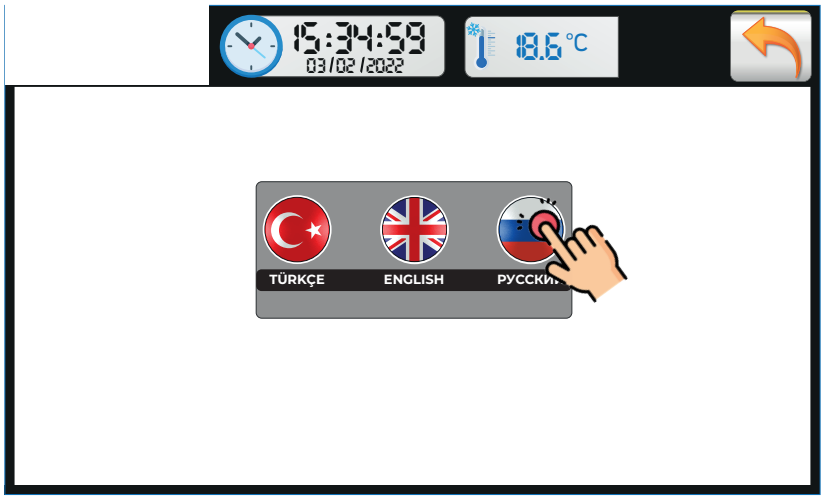




This is the page where we see the reasons why problems and accidents occur in the machine in unwanted situations.

9.4.12 Language Options

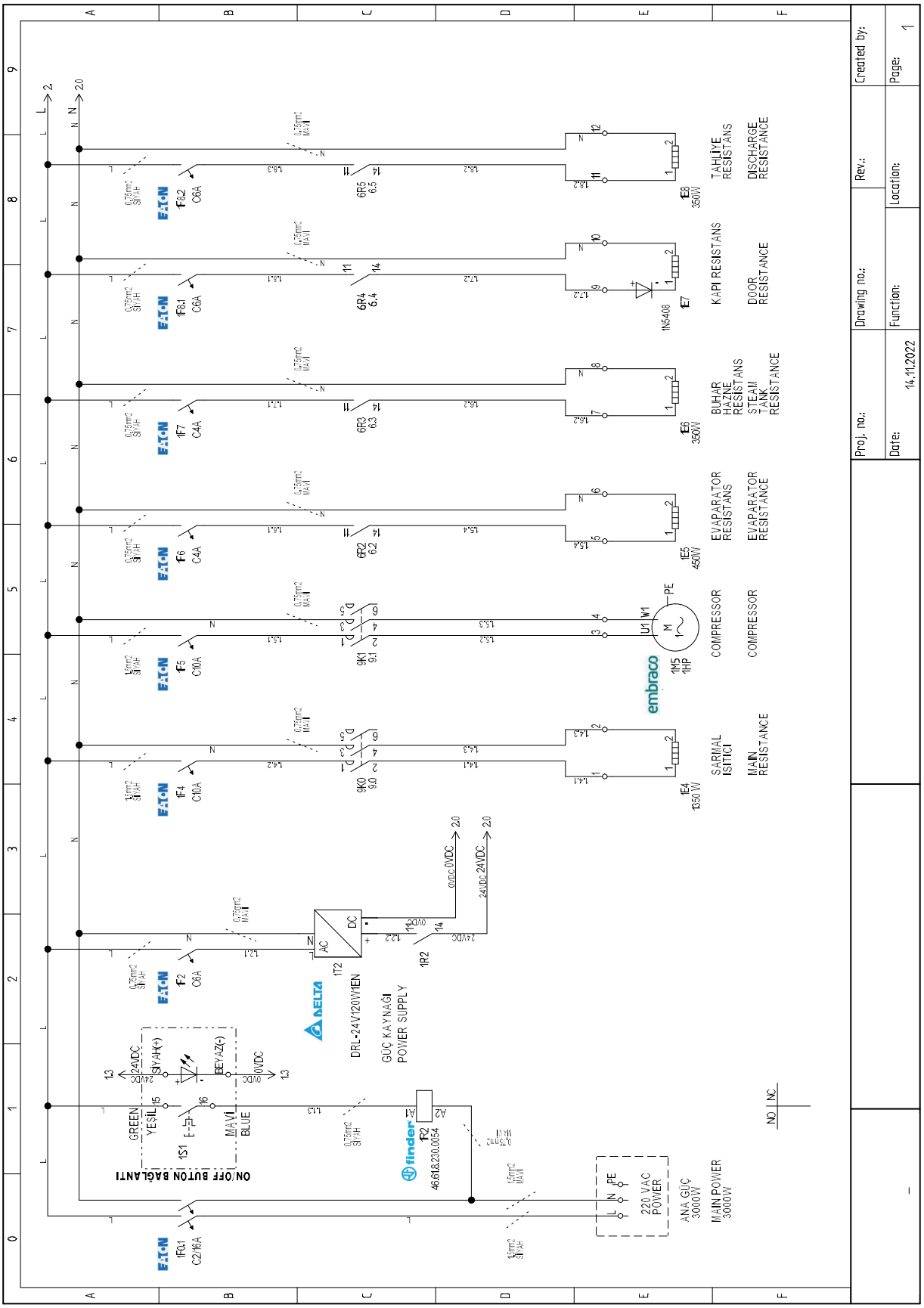




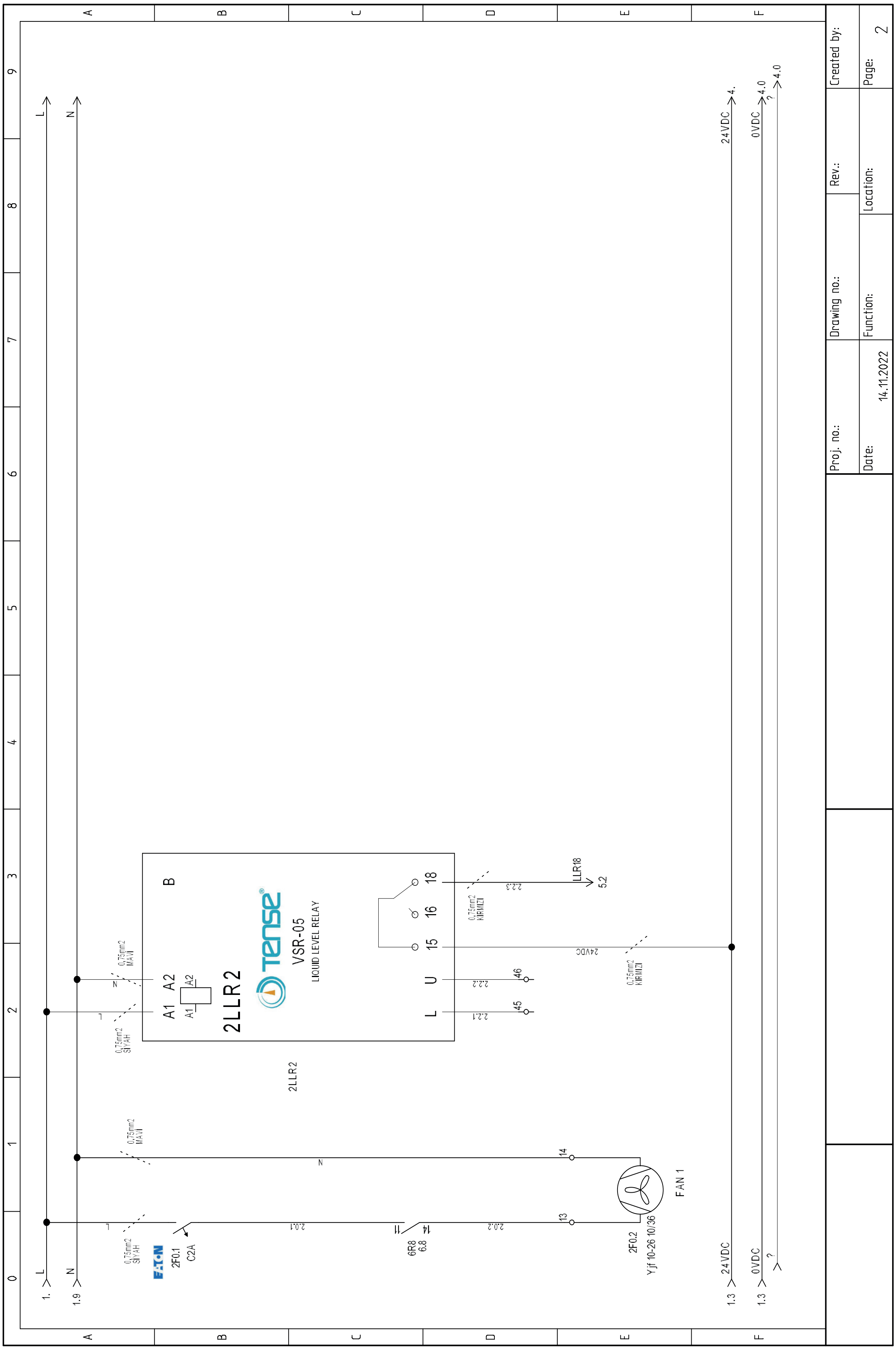
This is the screen where you select the language you want the machine to use.

10 ELECTRICITY PROJECTS

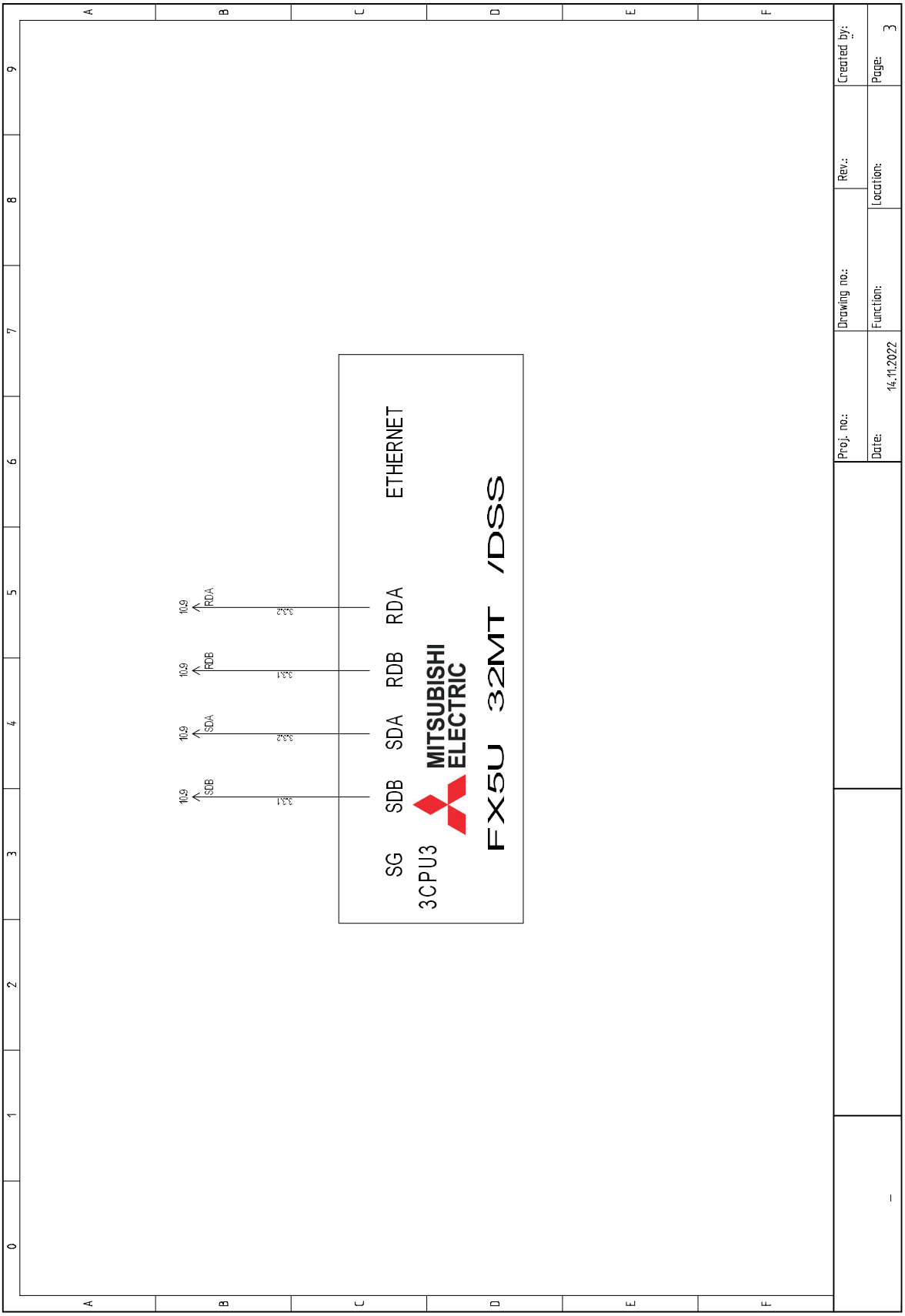
11.1



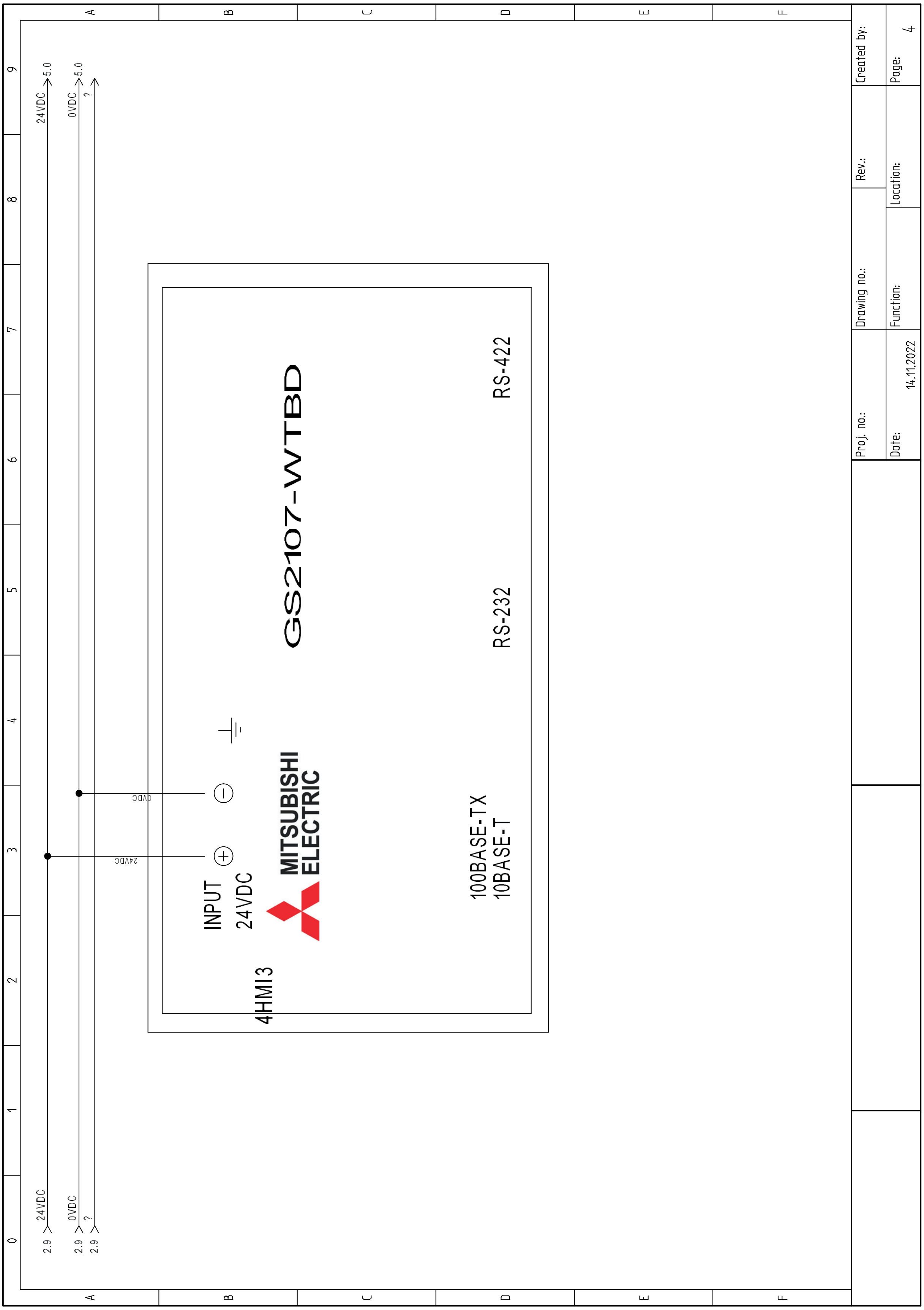
ggmgastro

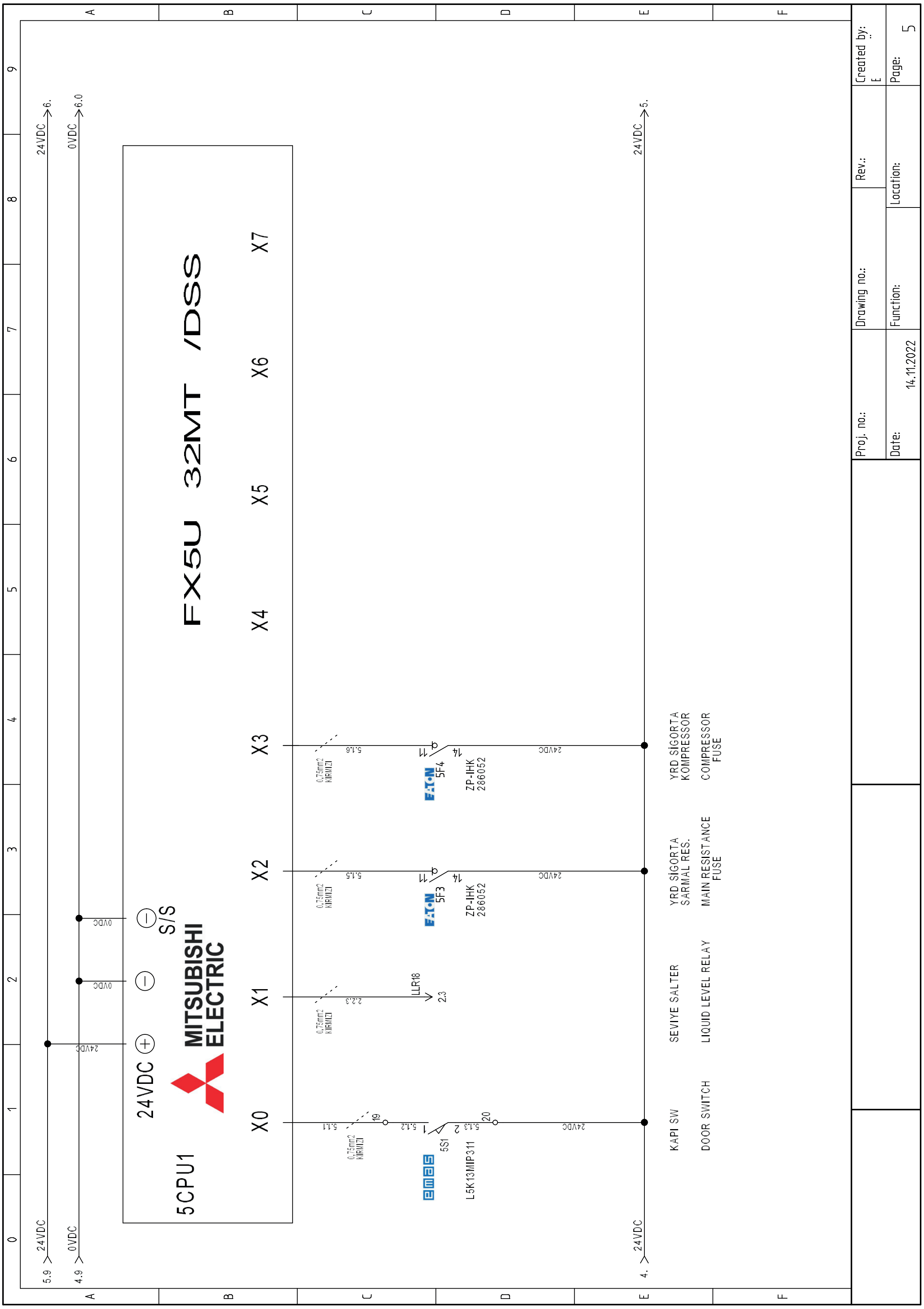


2LLR2
VSR-05
LIQUID LEVEL RELAY
A1 A2
L U 15 16 18
FAN 1
2F0.1
C2A
2F0.2
6R8
6.8
24VDC
0VDC
LLR18
5.2
Proj. no.:
Drawing no.:
Rev.:
Created by:
Date:
14.11.2022
Function:
Location:
Page:
2

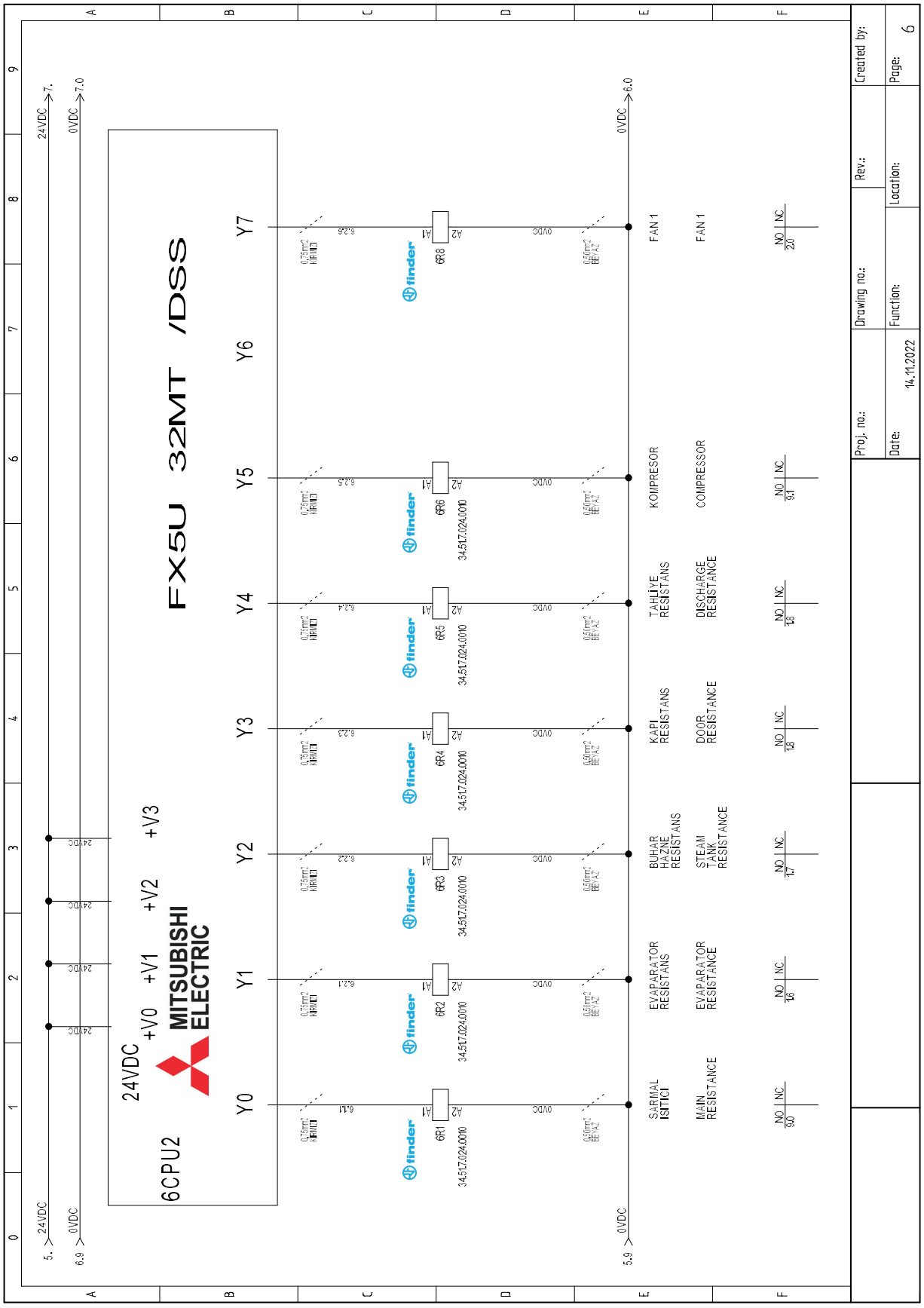

FX5U 32MT /DSS
MITSUBISHI ELECTRIC
3CPU3
SG
SDB
SDA
RDB
RDA
ETHERNET
10.9
SDB
3.3.1
10.9
SDA
3.3.2
10.9
RDB
3.3.1
10.9
RDA
3.3.2
Created by:
Page: 3
Rev.:
Location:
Drawing no.:
Function:
Proj. no.:
Date: 14.11.2022

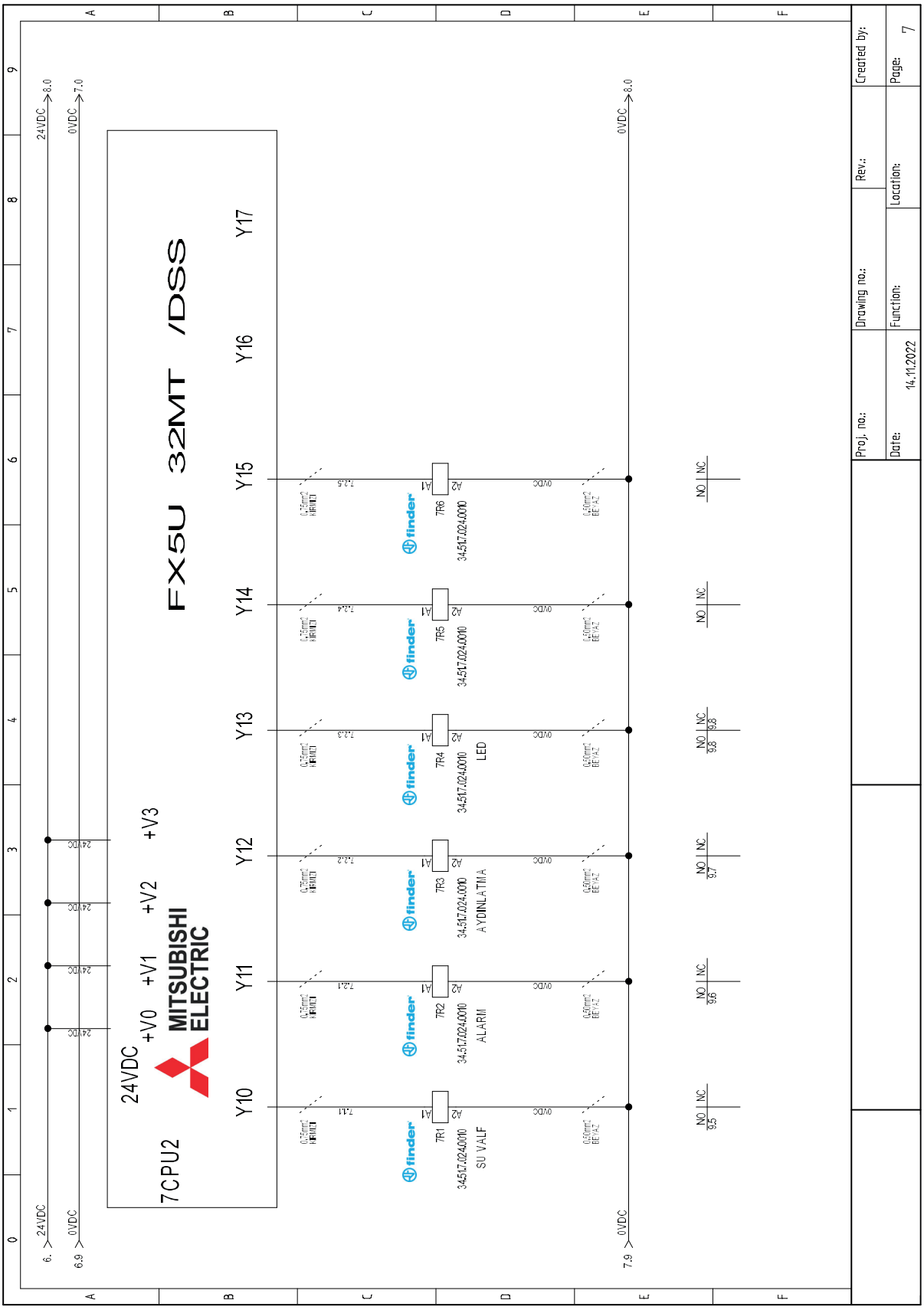
ggmgastro

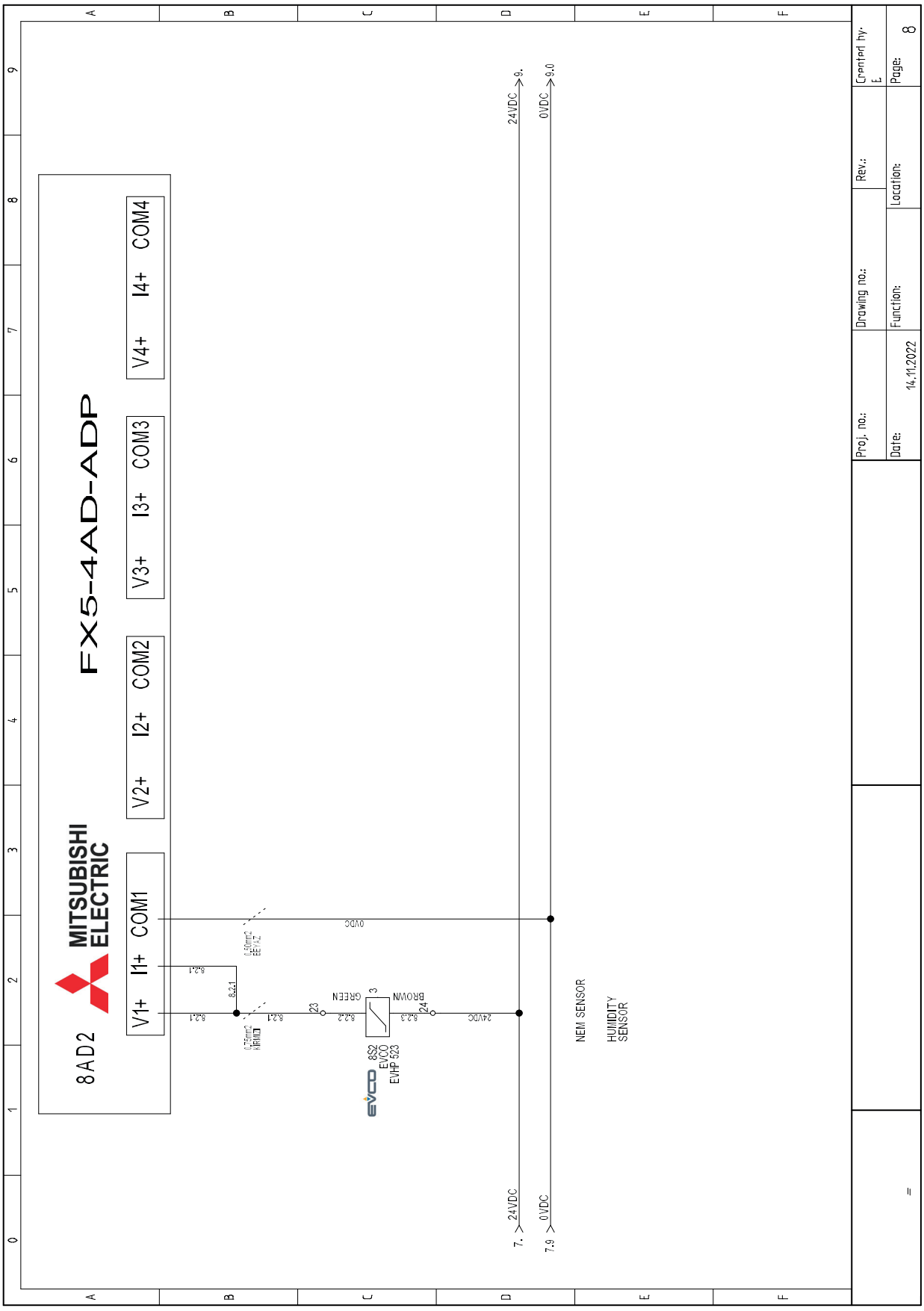

GS2107-WTBD
MITSUBISHI ELECTRIC
INPUT
24VDC
4HMI3
100BASE-TX
10BASE-T
RS-232
RS-422
24VDC
0VDC
Proj. no.:
Drawing no.:
Rev.:
Created by:
Date:
14.11.2022
Function:
Location:
Page:
4



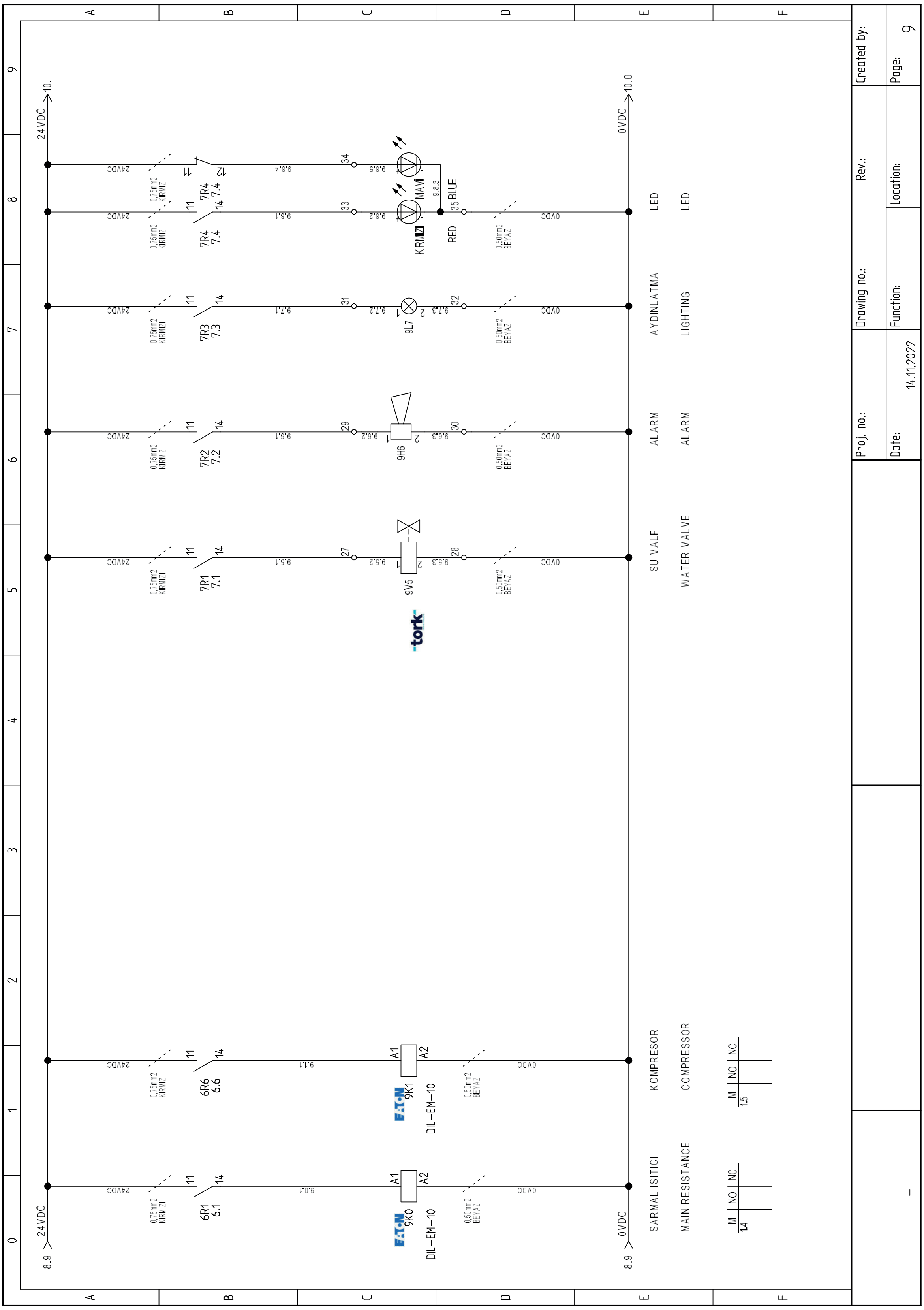
FX5U 32MT /DSS
MITSUBISHI ELECTRIC
5CPU1
24VDC
0VDC
S/S
X0
X1
X2
X3
X4
X5
X6
X7
5S1
L5K13MIP311
5F3
5F4
ZP-IHK
286052
LLR18
KAPI SW
DOOR SWITCH
SEVIYE SALTER
LIQUID LEVEL RELAY
YRD SIGORTA
SARMAL RES.
MAIN RESISTANCE
FUSE
YRD SIGORTA
KOMPRESSOR
COMPRESSOR
FUSE
Proj. no.:
Drawing no.:
Rev.:
Created by:
Date:
14.11.2022
Function:
Location:
Page:
5


FX5U 32MT /DSS
6CPU2
24VDC +V0 +V1 +V2 +V3
MITSUBISHI ELECTRIC
Y0 Y1 Y2 Y3 Y4 Y5 Y6 Y7
24VDC
0VDC
6R1 6R2 6R3 6R4 6R5 6R6 6R8
34.517.024.0010
finder
SARMAL ISITICI
EVAPARATOR RESISTANS
EVAPARATOR RESISTANCE
BUHAR HAZNE RESISTANS
STEAM TANK RESISTANCE
KAPI RESISTANS
DOOR RESISTANCE
TAHLIYE RESISTANS
DISCHARGE RESISTANCE
KOMPRESOR
COMPRESSOR
FAN 1
FAN 1
NO NC
Proj. no.:
Drawing no.:
Rev.:
Created by:
Date: 14.11.2022
Function:
Location:
Page: 6

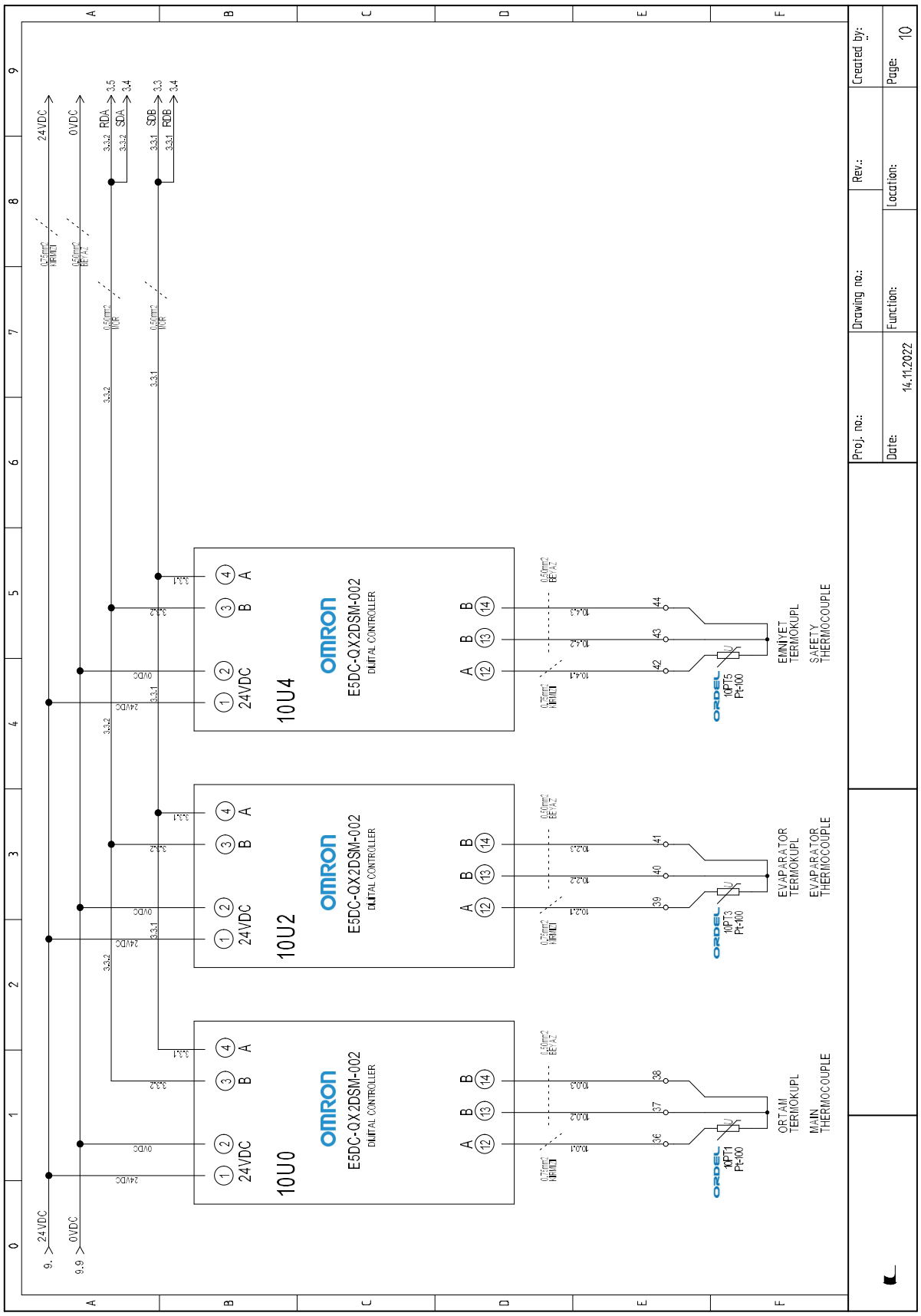

FX5U 32MT /DSS
7CPU2
24VDC
+V0
+V1
+V2
+V3
MITSUBISHI ELECTRIC
Y10
Y11
Y12
Y13
Y14
Y15
Y16
Y17
SU VALF
ALARM
AYDINLATMA
LED
finder
34.517.024.0010
24VDC
0VDC
NO NC
Proj. no.:
Drawing no.:
Rev.:
Created by:
Date: 14.11.2022
Function:
Location:
Page: 7


MITSUBISHI ELECTRIC
8AD2
FX5-4AD-ADP
V1+ I1+ COM1
V2+ I2+ COM2
V3+ I3+ COM3
V4+ I4+ COM4
24VDC
0VDC
GREEN
BROWN
8S2
EVCO
EVHP 523
NEM SENSOR
HUMIDITY SENSOR
Proj. no.:
Drawing no.:
Rev.:
Created by:
E
Date:
14.11.2022
Function:
Location:
Page:
8

ggmgastro



24VDC
0VDC
SARMAL ISITICI
MAIN RESISTANCE
KOMPRESOR
COMPRESSOR
SU VALF
WATER VALVE
ALARM
ALARM
AYDINLATMA
LIGHTING
LED
LED
DIL-EM-10
9K0
9K1
9V5
9H6
9L7
KIRMIZI
MAVİ
RED
BLUE
6R1
6R6
7R1
7R2
7R3
7R4
Proj. no.:
Drawing no.:
Rev.:
Created by:
Date:
14.11.2022
Function:
Location:
Page:
9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0VDC
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RCB
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OMRON
E5DC-QX2DSM-002
DİJİTAL CONTROLLER
ORDEL
10PT1
Pt-100
10PT3
10PT5
ORTAM
TERMOKUPL
MAIN
THERMOCOUPLE
EVAPARATOR
EMNİYET
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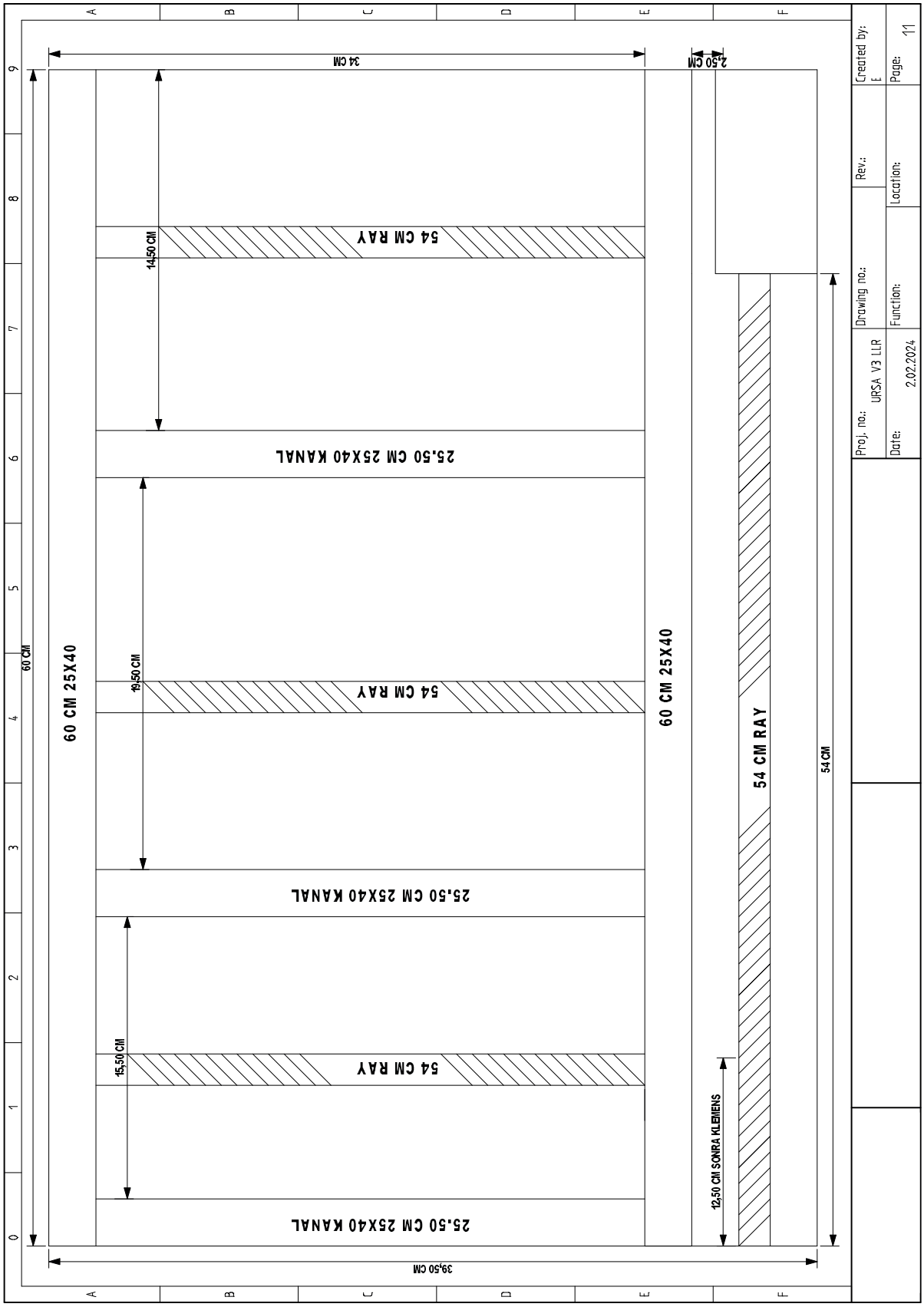
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12,50 CM SONRA KLEMENS
39,50 CM
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Date: 2.02.2024