GOLDEN COFFEE ROASTERS

Installation & Operation Manual

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GOLDEN COFFEE ROASTERS

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GOLDEN Shop Roasters:

GR1+
GR-3
GR-5
GR-10
GR-15
GR-20

ATTENTION!

Any wrong assembly may cause service and material damage, injury, or risk of death. Please make sure you have a deep consideration by looking at this user manual!

PLEASE READ CAREFULLY THIS USER MANUAL!

Please read this user manual carefully to fully understand how to operate the machine, which uses advanced technology for maximum efficiency. For proper use, follow the instructions step by step and read the manual from start to finish. Keep it in a safe, accessible place for future reference.

WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

This user manual will help you to install your machine rapidly in a safe way.

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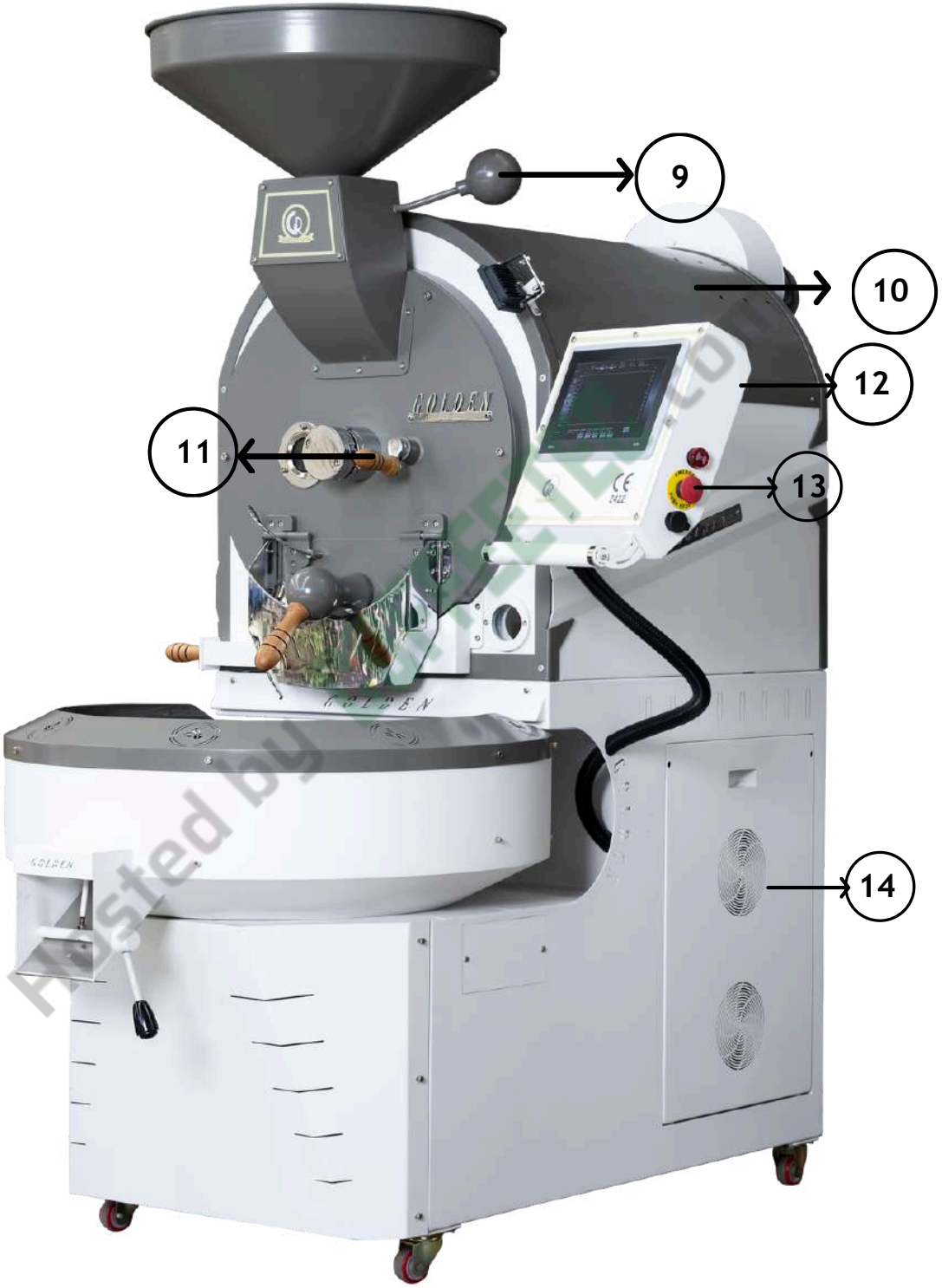

1.DEFINITION OF THE MACHINE AND SPECIFICATIONS

1.1. General View and Definitions

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1.DEFINITION OF THE MACHINE AND SPECIFICATIONS

1.1. General View and Definitions

1.1.2. Defanations

1. Hopper: It is used for feeding green beans to send them all from top of the inside the roaster drum.

2. Drum Sight Glass: The roasting process can be observed through this glass.

3. Front Drum Bearing: It provides smooth rotation movement to the drum. At the same time, it links to the drum adjustment tool.

4. Burner Sight Glass: It offers a sight to check for the flames.

5. Chaff Drawer: It collects dust and chaffs, which fall between the drum and drum door arisen from roasting progress.

6.Drum Discharge lever: It is used to open/close the drum door.

7. Cooling Tray: It is used for roasted bean cooling.

8. Cooling Tray Discharge Lever: It provides discharge cooled roasted beans from the cooling tray.

9. Hopper Lever: It is activated to load green beans inside the drum.

10. Drum Housing: The drum is heated by burners inside the combustion chamber. Green beans are roasted inside the drum by rotational motion.

11. Sample Spoon: It is located on the drum cover. During the roasting process, the user can take samples.

12. Controller: It contains all controllable electric - electronic types of equipment and lets the user adjusting the triggers of the roasting process.

13.Emergency Stop: It cuts all electricity and gas flow in case of any emergency.
WARNING! It is highly recommended that the electricity and the gas must be cut from their sources.

14. Control Panel Housing: It is a lockbox of the electronic components of control panel.

15. Roasting Control Lamp: The lamp for illuminating the beans in the cooling tray to check roasted beans

16. Chaff Collector Cyclone: It helps to collect all the dust and chaffs, which are arisen during roasting progress from inside the drum, and all these materials are preserved inside this chaff collector.

17. Main Switch: It applies or disconnects the power of the roaster.

18. Gas Inlet: The gas pipe inlet to connect the roaster to the gas source.

19. Gas Pressure Gauge: The indicator to show the pressure of incoming gas

20. Cooling Tray Exhaust: The air outlet that expels the hot air produced by the coffee beans during cooling, along with the remaining coffee chaff

21.Bean Temperature Indicator: The set temperature can be adjusted by this device. Users can observe current temperature changes.

22.Exhaust Temperature Indicator: It only shows the temperature of the exhaust.

23.Lamp Switch: The switch to activate / deactivate roasting controlling lamp.

24.Burner Reset: It restarts the gas controller when the burner gives an error.

25.Drum Motor Button: The push button used to turn on/off the drum motor.

26.Exhaust Fan Button: The push button used to turn on/off the blower motor.

27.Agitator Button: The push button used to turn on/off the cooling mixer.

28.Cooling Fan Button: The push button used to turn on/off the fan motor.

29.Drum RPM Regulator: It is the potentiometer that adjusts the speed of the drum motor.

30.Exhaust RPM Regulator: It is the potentiometer that adjusts the speed of the blower motor

31.Burner Button: The push button is used to activate/ deactivate the burner system.

32.Flame Level: It is the potentiometer that adjusts the flame level.

1.DEFINITION OF THE MACHINE AND SPECIFICATIONS

1.2. Technical Specifications

Batch Capacity	1,5 KG Max	3 KG Max	5 KG Max	10 KG	15 KG	20 KG
Capacity per Hour	8 KG Max	18 KG Max	30 KG Max	40 KG	60 KG	80 KG
Roasting Cycle	7-12 mins	8-14 mins	7-17 min.	9-17 mins	9-18 mins	10-20 mins
Type of Controlling	PLC	PLC	PLC	PLC	Manual / PLC	Manual / PID Automation
PLC Screen	7" Beijer	7" Beijer	10" Beijer	10" Beijer	10" Beijer	10" Beijer
Electrical Power Options	110-220-380 V / 50-60 Hz	110-220-380 V / 50-60 Hz	110-220-380 V / 50-60 Hz	110-220-380 V / 50-60 Hz	110-220-380 V / 50-60 Hz	220-380 V / 50-60 Hz
Power Consumption	0,79 KW/h	0,86 KW/h	1.47 KW/h	2,24 KW/h	2,24 KW/h	3,3 KW/h
Heating Source	LPG – LNG – Natural Gas	LPG – LNG – Natural Gas	LPG – LNG – Natural Gas	LPG – LNG – Natural Gas	LPG – LNG – Natural Gas	LPG – LNG – Natural Gas
Burner Type	Premix	Premix	Premix	Premix	Premix	Premix
Burner Power	16 KW/h max	16 KW/h max	28 KW/h max	28 KW/h max	36 KW/h	36 KW/h
Gas Consumption (NG)	1.24 m³ max	1.67 m³ max	2.08 m³ max	3,37 m³ max	3,75 m³ max	2,80 m³ max
Gas Consumption (LPG)	1.63 m³ max	1.24 m³ max	1.56 m³ max	2,18 m³ max	2,80 m³ max	3,75 m³ max
Cooling Time	± 3 mins	± 3 mins	± 3 mins	± 3 mins	± 3 mins	± 3 mins
Flame Height	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
Air Flow	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
Drum Speed (RPM)	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
3rd Party Software Compability	Cropster, Artisan	Cropster, Artisan	Cropster, Artisan	Cropster, Artisan	Cropster, Artisan	Cropster, Artisan
Quality Compliance	CE-ISO	CE-ISO	CE-ISO	CE - ISO	CE - ISO	CE - ISO
Measurements (WxDxH)	740x1150x1110 mm	750x1410x1500 mm	705x 1650 x 1780 mm	1350x1750x1850 mm	1400x1910x1930 mm	1450x2040x2040 mm

2.WARNINGS

For your safety, be sure to discharge the compressed gas that accumulates in the roasting machine before switch it off. To discharge the compressed gas from the roasting machine, initially shut your gas supply off and wait for the burners to self-extinguish when the burners are in the flamed position. Once you ensure that burners are extinguished, check the gas pressure from the gas pressure gauge. Be sure that the gas pressure value is O (zero) mbar.

DANGER

For your safety, don't touch the roasting drum!

- There is a risk of burnt when touching the roaster. Keep your distance from the machine.
- Without appropriate cooling on time, the roasted products may catch fire and occurs serious accidents.
- The roaster must be emptied immediately when the target color is reached.
- There is a risk of fire due to the heat reactions from inside roasted product above 200°C. The roasted product must cool down quickly on the cooling tray.
- The darker the roast, the faster it has to be cooled.
- The maintenance must be done by specialists.

What to do in exceptional situations;

Fire in the roasting drum:

- Leave the roasted product in the roasting drum; do not empty!
- Avoid air entry.
- Gas tap CLOSED.
- Wait for the machine to cool down.

Fire on the cooling sieve:

- Close gas tap
- Main switch for electric OFF.
- Extinguish roasted product with water.

In the event of a power failure:

- Close gas tap.
- Open drum door to discharge roasted product and lock the arm.

2.1. Transportation of the Machine

- Please take consideration of the transportation of the machine, which is already defined in this User Manual.
- Protect the machine from any external impact risk during transportation.
- Check the machine after you unpack it for the first time, and please do not run the machine if you find any defected area or part on the machine.
- Inform the manufacturer or responsible service during the first run of the machine.
- Please be sure that the machine has to be put on a flat surface which does not take any down- row risk by fault for any hit or impact.
- Do not put the machine on a place that contains a high rate of humidity or wet.

2.2. Unpacking Crate and Physical Controlling of the Machine

WARNING!

When you receive your machine, before signing the delivery note, check its crate for any damage. Open the crate with the courier and check the machine for damage. If you detect any damage such as dents, scratches, or deformation; please be sure to photograph it and advise the courier to issue a damage report.

2.3. Localization of The Roaster

Your roaster must be installed and operated on a flat and fireproof surface. Furthermore, the surface should also be appropriate to bear proper weight.The distance of walls, counters, or any other kinds of stuff from the roaster to the roaster must be at least 50 cm or more to make sure that the roaster is cooled sufficiently. Do not install any cabinets or storage areas above the roaster or near the pipes. Ensure that all controls, access doors, and inspection panels are accessible and can be opened without restriction.

2.4. Safety for Electricity Usage

Please make sure that you are having a good conditioned or renewed electrical infrastructure before you start to use the machine. This is very important for you to use the machine efficiently and safely.

WARNING!

Your roaster must be operated with a grounding electric plug. Otherwise, the proportional flame valve cannot function. It leads to ignition fails and the burner gives an error. The distance between the distribution board and your machine should be taken into consideration as it may cause voltage loss. If you need an extension lead, Golden Roasters highly recommends using at least 4 mm electric cable and it should be supplied by at least 32 amperage fuse.

Golden Roasters installs all electric and electronic devices as grounded electrically.

DANGER

Your roaster must be grounded to avoid any electric shock and any hazards related to electricity.

DANGER

Please beware of making electrical installation by yourself and receive the professional help of a certified electrician.

WARNING!

- This machine is equipped with a triple lead terminal.
- For this reason, you should use a triple lead electrical plug (Neutral, Phase, and Earth included) for your own safety.
- Please do not cut or remove your Earth cable from the plug. Cable cross-section has to be as defined below for the most suitable running of your machine;

The minimum requirement of 110V to 240V is 3*2,5 mm cable.

The minimum requirement of 380V to 415V is 5*2,5 mm cable.

2.5. Gas Warning

DANGER

- Incorrect gas connections can cause serious accidents such fire and explosion. Let only authorized specialists connect the gas line. Before the shop roaster is used for the first time, the gas installation must be checked for leaks. The line must be vented safely. Unburned propane gas cannot be detected by smell.
- Propane is heavier than air and can form explosive mixtures. Set up liquid gas cylinders following the gas supplier's safety regulations.

2.5.1. In Case of Any Gas Leakage

WARNING!
If there is a Gas Leakage;

- The environment should be ventilated by opening doors and windows.
- If the gas leak is intense, it should be leaving the place to stay.
- The fire extinguisher must be made a ready case of any fire.
- Do not use electric buttons and electric devices.
- Gas must be cut off from the gas inlet of the roaster, and the gas sources.
- It is recommended using the gas detector if the machine utilizes in a close place.

DANGER!
It is highly recommended to check for gas leakage by soapy water or gas detectors always before operating your roaster. Do not check gas leakage by an open flame.

2.6. Some Important Notes

- Please make sure that current chimney pipe equipment is completely done before you start using the machine.

- Please make sure before you start any maintenance or cleaning process for your machine, all the electricity connection and main switches have to be changed to OFF mode to protect yourself from any electric shock risk.

- Basic interferences which the end-users can make are listed at the end of this User Manual with details.

3.INSTALLATION

3.1.General Information

Please read all these articles carefully from the beginning to the end before you start up using the machine. The installation has to be done by supporting an expert in this field.

WARNING!
Please follow the instructions step by step for your safety in use and warranty period availability as well.

3.2. Electrical Connections

- Please ask for some responsible technicians for any of the electrical components you have with this machine in case of any needs.
- Please check the main electrical line if it is suitable for using the machine first. There are many different type electrical sources which run with different voltages and Hz like 100/110/220/380/415 volt, 50-60 Hz, and Single -Three Phase options.
- Please check the electrical specifications of your machine and connect the proper plugs and components.
- It is required that the electrical connections of the building should be suitable for the power of the machine.
- When the device is operating, do not turn any machine on at the same time if it is bigger than 1000 watt and if they are using the same fuse.
- Responsibility for building's electrical installations belongs to the customer.

WARNING!
The distance between the distribution board and your machine should be taken into consideration as it may cause voltage loss. If you need an extension lead, Golden Roasters highly recommends using at least a 4 mm electric cable, and it should be supplied by at least 32 amperage fuse.

DANGER!

Your roaster must be grounded to avoid any electric shock and any hazards related to electricity.

Golden Roasters technicians install all electric and electronic devices as grounded electrically.

3.3. Gas Connections

- Gas installation must be done by a licensed gas company or licensed specialist as well as compliance with regulations and laws.
- The size of the gas supply pipeline must be able to adapt to the total length of the operation and be able to accommodate any required elbow.
- The gas supply pipe line should be proper measure at the connection of your roaster. The burner can be set up for different gas types and pressures with special nozzles as the following table;

Gas Type	Pre - Burner Pressure	Nozzle
Natural	20 mbar	120
Propan	30 mbar	75

DANGER!

In case of fire emergency; shut off valve must be installed to a gas line to rapidly interfere.

3.3.1 Gas Regulator

- Your roaster has a gas regulator on its gas source inlet.
- Recommended gas pressures for bottled gas are 30-35 mbar; for natural gas 20-30 mbar
- The manometer shows the pressure of the burner manifold, not incoming gas pressure comes to the gas inlet.
- The gas pipeline has an important role in the performance of the roaster. Please ensure the gas supply line is appropriate to gain maximum BTU for burners.
- Please make sure that the gas technician tests the pipeline and check for the gas system and connection of the roaster. During the test of the roaster, please ensure the technician runs the test at the full flame level.

It is highly recommended to check for gas leakage by soapy water or gas detectors always before operating your roaster.

Do not check gas leakage by open flame.

3.4. Cyclone to Roaster Connections

Golden Roasters series roasters have separate cyclone with a separate blower that pushes smoke towards exhaust outlet.

While the roasting process, exhaust smoke carries foreign substances and oil to chimney connections, and these adhered substances may lead to fire hazards.

Cyclone is shipped apart from the roaster. Mounting screws are attached to the related screw housing of the cyclone. Please assemble the cyclone to the roaster before installing the chimney pipe and plug in to control the panel slot.

- The cylone must be assembled to the rear of your roaster. Then the recommended pipe should be used and must be attached properly to the chimney or to the outside.
- It is recommended strapping each joint part of the pipe with heat resistant tape.
- The pipeline should be as short as possible and sharp deflections and should be avoided.

3.4.1. Some Special Notes for Chimney Connections

WARNING!
Please pay attention to the required local and national regulations.

WARNING!
Please kindly ensure to get professional service and support from certified technicians to make the chimney connections of your roaster.

- Chimney connection has great importance on the performance of the roaster and must be done by authorized companies or certified technicians both for efficiency as well as avoiding some dangers.

- In order to avoid any risk of fire, it is highly recommended to use stainless steel, double- walled, positive pressure grease ducts that are resistant to at least 1000 centigrade degrees.

- Incorrect connection of the pipes and the use of pipes other than the recommended flue pipe may create dangers such as fire hazard.

- Exhaust ducts longer than 10 meters and have more than 2 pieces of 90° degree bends and/or horizontal sections longer than 1 meter may occur need for additional fan.

The needed air flow rate of the exhaust chimney system should be calculated by experts and the appropriate system should be installed. The most efficient system is straight pipes that are connected straight to the chimney. You may need to use elbow pipes, which can reduce the efficiency of the exhaust system. Besides, elbow pipes can cause backpressure. If the duct connection is too long, the system may also need a booster fan to assist airflow.

Danger!

Failure to clean the chimney and machine increases the risk of fire. Please follow the recommended maintenance period in article 6.1.

4.UTILAZITON OF THE MACHINE

4.1. Switching On/Off The Machine

WARNING!
Please follow carefully the below instructions;

1) Turn the main switch (17) located on the right side of the control panel from O to 1.

2) Activate on respectively the drum (25), the exhaust (26), and the burner on/off button (31)

3) Please be sure that the bean temperature indicator (21) is set to the desired temperature level.

- Please press P button
- Set temperature by arrow buttons
- To confirm the selection, press ↵ confirmation button

4) Burner is activated automatically. Please check through burner sight glass.

5) If the burner is not activated burner reset button (24) located on the control panel blinks red as a warning. Press and hold the burner reset button for one second to activate the burner. Please do this process continuously until the burner is activated.

WARNING!
The temperature of the drum increases, the drum material may be expended. This process leads to drum steel rubs against the front frame of roaster housing. When friction sound comes out; please follow the steps in Section 7. DRUM ADJUSTMENT

6) The roaster gives an alarm when the temperature reaches to set the temperature to load coffee beans throughout the funnel to the drum.

7) Push the hopper lever (9) located under the funnel to load green beans.

8) The drum RPM, the exhaust RPM, and the flame level can be set by potentiometers from 0 to 100% on the control panel for each phase of the roasting process.

9) The roasted beans can be observed through Drum Sight Glass (2) and be taken by sample spoon (11).

10) Before discharging the rotated beans to the cooling tray; switch on the mixer and mixer fan.

11) To discharge the roasted beans, lift the drum discharge lever (6).

12) After beans cooled down, lift the Cooling Tray Discharge Lever (8) discharge coffee beans.

13) Golden roasters have 4 separate motors to let the users roast and cool the beans simultaneously to fasten the next batch. You can follow the aforementioned steps from 7 to start a new roasting batch.

14) After the roasting process is done, to switch off the machine at end of the roasting day please follow the below steps;

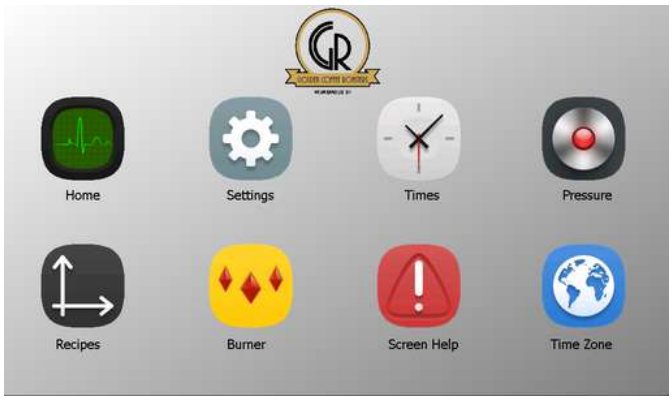
- Do not switch off the drum and the blower buttons till the machine cools down (50°C).
- Close the gas flow from the gas source priorly.
- Toggle off the burner switch(31)
- It is recommended to set exhaust fan at 100%.
- Do not leave the drum door open to let the thermocouple read temperature data inside the drum.
- Wait until the bean temperature indicator shows 50°C. Otherwise, drum material and around may damage or be distorted.
- When drum temperature decreases to 50°C, please switch off the drum and exhaust motors.
- Switch off the main switch.
- Clean inside the chaff drawer(5) and Chaff Collector (16) completely.

5. CONTROLLING THE ROASTER BY TOUCH SCREEN

Golden Coffee Roasters are offered with PLC Touchscreen Roasting Software feature as optional.

5.1. Using of Touch Screen

Welcome Screen:



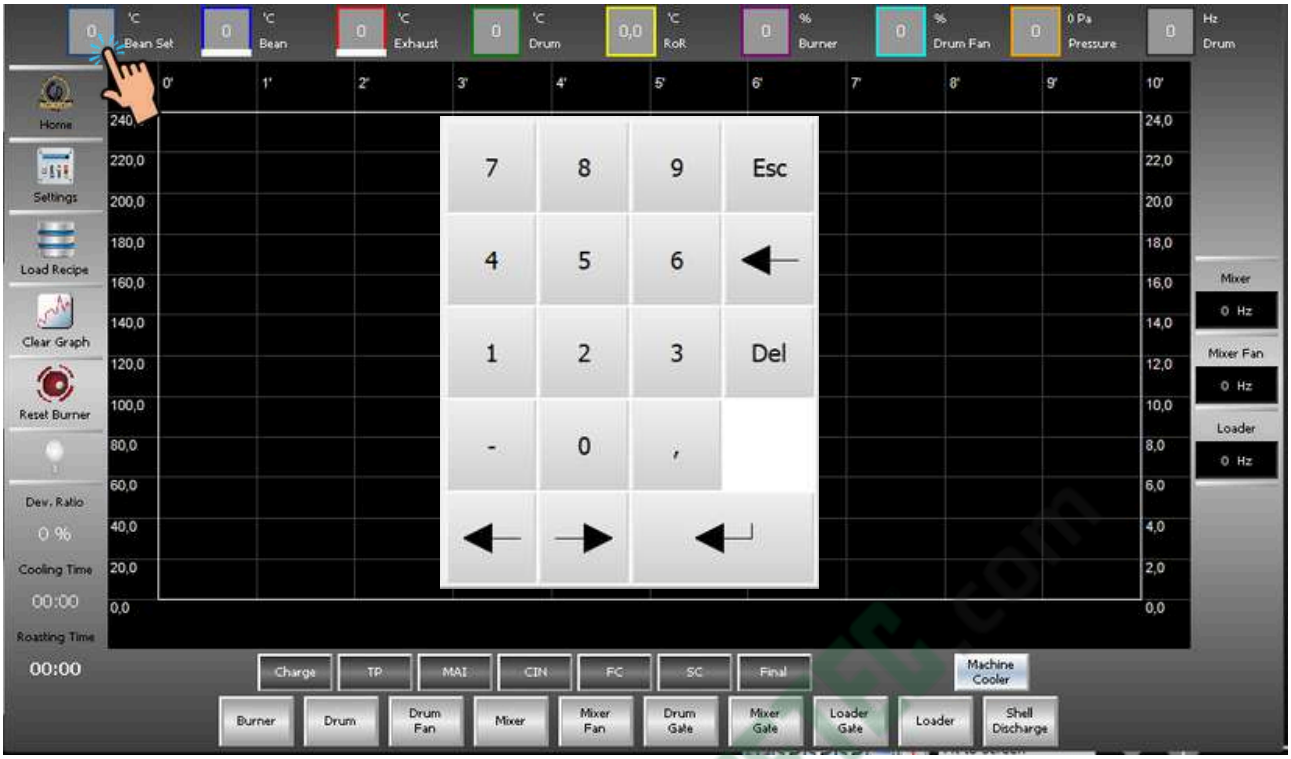
When the roaster is turned on, the welcome screen will appear. Please press on Home logo to proceed to the home screen.
Other logos provide access to the corresponding settings. These settings can also be adjusted from the profile screen.

Main Screen

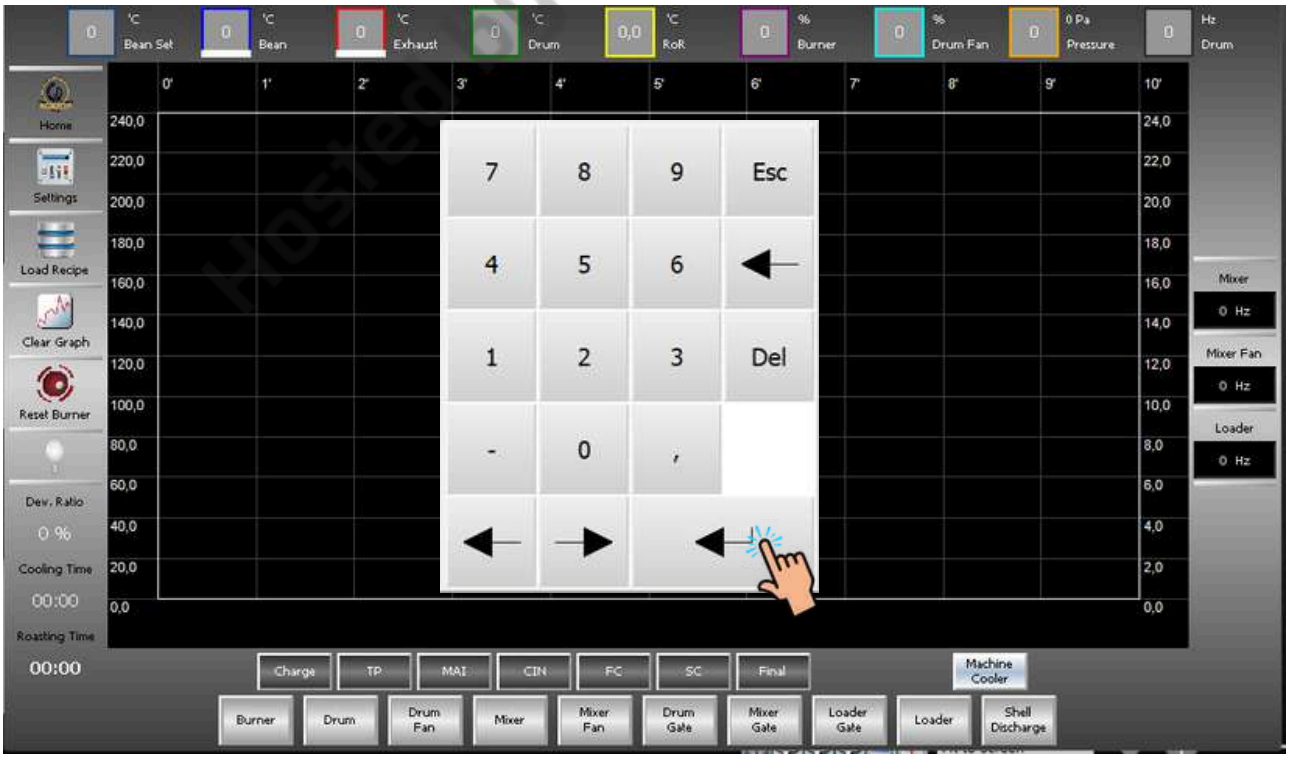
- On the home screen; set temp, burner, drum fan, drum speed values as well as roasting equipment such as loader, destoner, mixer speed can be adjusted.

- By pressing each part of the roaster icon, corresponding settings pop-up appears and can be modified.

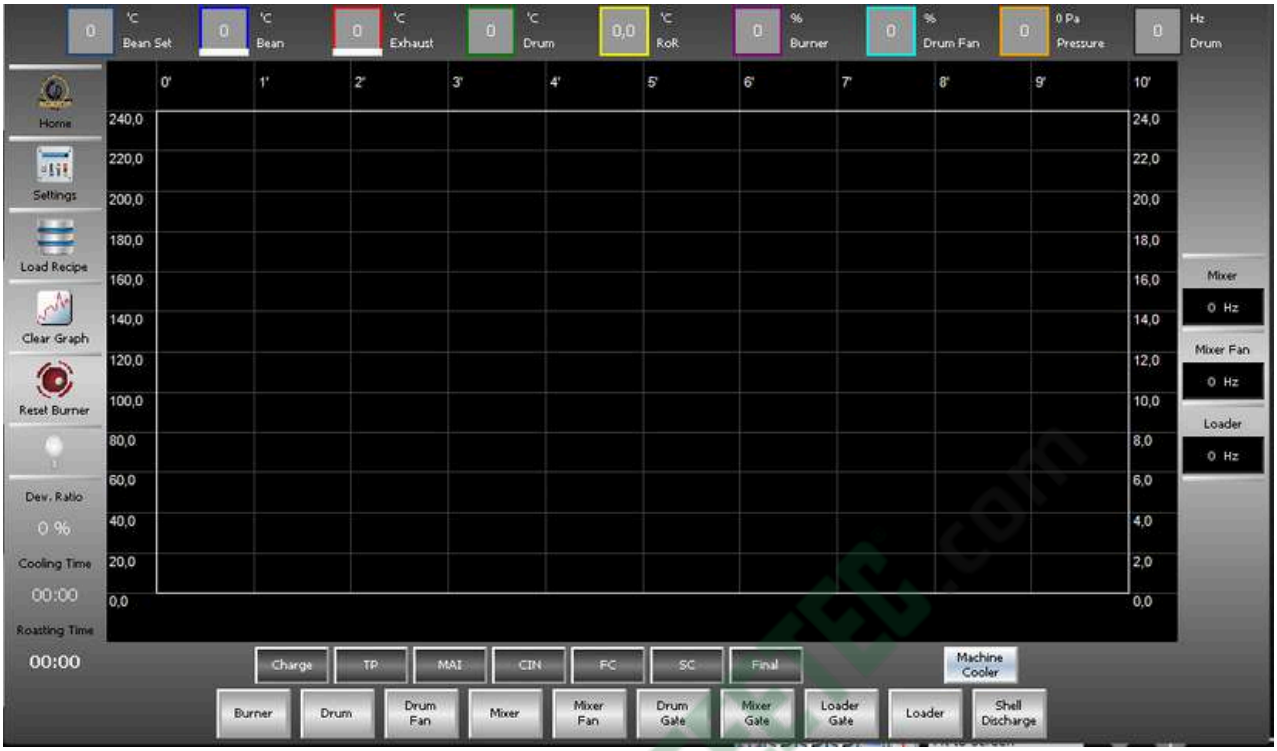
- The pop-up screen appears when the icon of each aforementioned parameter is clicked.



- Preferences can be modified and approved by pressing “Confirmation Mark”



5.2. Manual Roasting and Creating Recipes



- To start manually roasting, the 'Bean Set' value must be entered first.
- The ‘Bean’, ‘Exhaust’, and ‘Drum’ temperatures displayed at the top of the screen are indicators and cannot be adjusted.
- ”Burner”, “Drum”, and “Drum Fan” buttons are used to adjust the corresponding values. The flame level, as well as the motor RPM of the drum and drum fan, can be modified.
- RPM of the related motors can be regulated based on motor hertz:

  - Drum Motor Hz

  - Mixer Motor Hz (Agitator Rotation Speed)

  - Mixer Fan Hz (Exhaust Fan)

  - Loader Motor Hz

  - Destoner Motor Hz

5.2.1 Functions of The Buttons

- Charge: To begin roasting, press the “Charge” button.

  - On fully automatic systems, the green bean hopper will open automatically upon clicking the button.

  - On manual and semi automatic systems, green bean hopper must be opened manually.

- TP: It is used to mark “Turning Point” on the roasting curve. Software mark the TP automatically. User can mark manually as well.

- MAI: It is used to mark “Maillard Reaction” on the roasting curve.

- CIN: It is used to mark coffee beans as “Cinnamon” on the roasting curve.

- FC: It is used to mark “First Crack” timing on the roasting curve.

- SC: It is used to mark “Second Crack” timing on the roasting curve.

- Final: It is used to mark “Final Crack” timing on the roasting curve to finish roasting phase.

After clicking “Final Button”, pop-up screen appears to confirm the ending of the roasting as well as saving the recipe.

- Machine Cooler: It is used to cool the roaster machine down. Once the drum temperature goes down to 50°C, system shuts down automatically.

- Burner: It is used to activate/deactivate the burner.

- Drum: It is used to activate/deactivate the motor of the drum.

- Drum Fan: It is used to activate/deactivate the motor of the exhaust for air circulation.

- Mixer: It is used to activate/deactivate the motor of the agitator.

- Drum Gate: It is used to open/close the drum door to discharge roaster beans to the cooling tray. In semi-automatic and manual roasters, drum door is activated manually.

- Mixer Gate: It is used to open/close the outlet of the cooling tray to discharge beans.

- Loader Gate: It is used to open/close the lid of the loader hopper to load green beans.

- Loader: It is used to activate/deactivate the motor of the loader.

- “Chaff Discharge” is automatically activated throughout the entire roasting process to collect chaff mechanically from the cyclone to the cyclone bin. It must be deactivated at the end of the roasting day

5.3. Overview of Touchscreen Interface:

Settings Submenu:

- In the settings menu; you can access the configuration menu for profile, burner, times and pressure settings.

- Each setting submenu, you can access the configration for regulation of the aforementioned values.

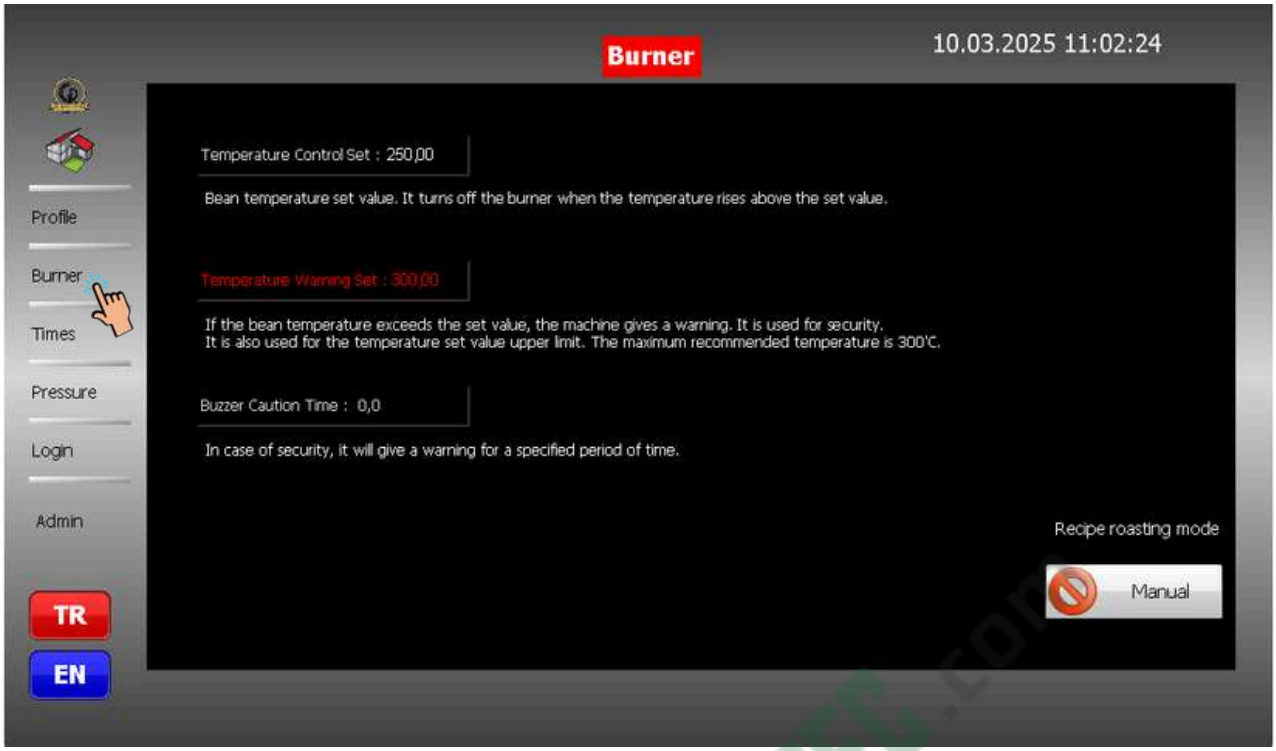
Profile:

- In the settings menu; you can access the configuration menu for profile, burner, times and pressure settings.

- Each setting submenu, you can access the configration for regulation of the aforementioned values.

- In the profile submenu; drum speed, drum fan speed, burner level and set temperature settings can be adjusted based on the previously determined and saved temperature, time, value and roasting steps such as turning point (TP), Maillard reaction(MAI), cinnamon (CIN), first crack (FC) and final (FIN).

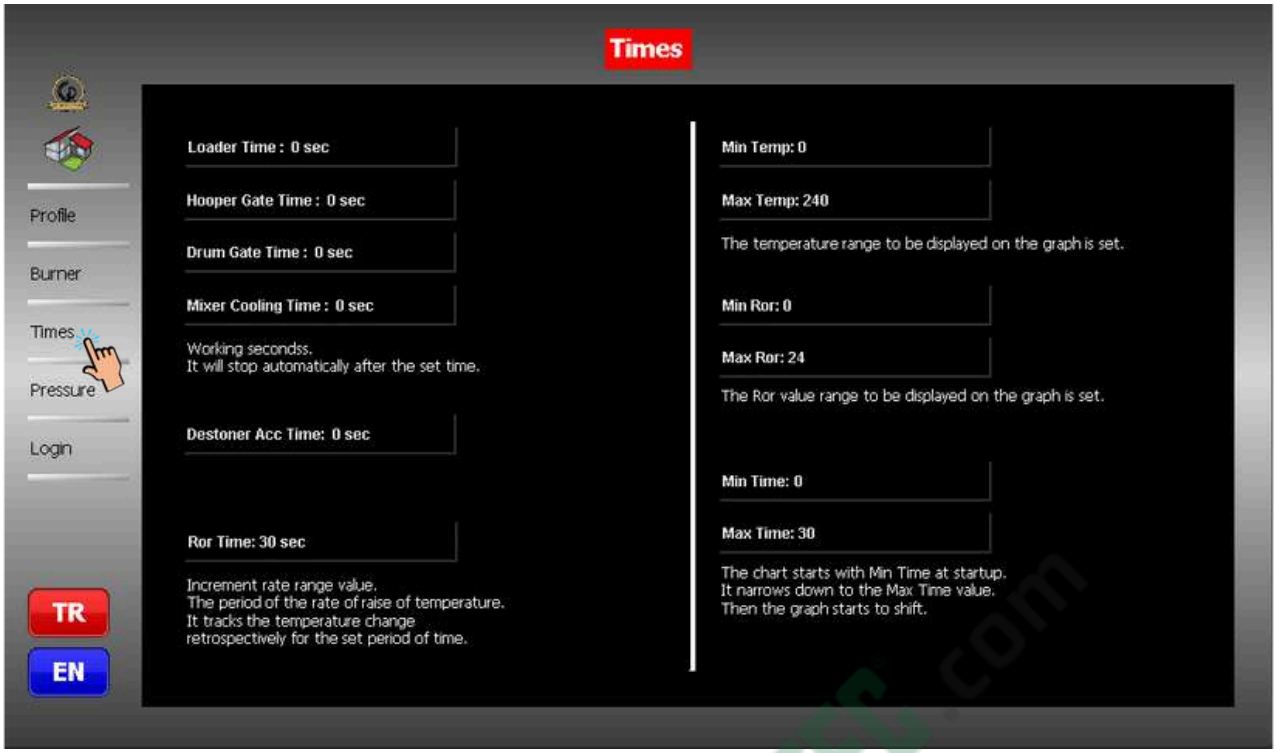
- The adjustments can be done by the green arrows located under the values. Once demanded modifications are done, press update to save the changes.



Burner:

- In the burner menu; you can set the maximum temperature that machine can reach during roasting phase.
- Temperature Control Set refers to maximum temperature that you can enter set value of the profile.
- Buzzer caution time refers to the length of bleeping in case of any emergency
- Recipe Roasting Mode refers to regulate roasting mode as whether manually or automated.

- According to the selected roasting mode, controlling the roasting process varies in terms of interventions such as on/off doors, discharging, loading beans, and activating roasting equipment.
- If the roaster machine is not equipped with fully automated systems, some manual interventions may be necessary



Times:

- In the times menu, the working duration of the parts and equipment of the roaster, as well as the timing on the profile curve, are displayed.

- Loader Time: The running time value of the loader motor. In a manual control roasting system without pneumatic on/off doors, the charging door of the loader must be opened by hand. In a fully-automatic system, the loader hopper door is opened automatically after 10 seconds to ensure the loader motor is revved, avoiding blockage caused by the coffee bean mass.

- Hopper Gate Time: This value determines the duration for which the hopper lid remains open. In fully automatic systems, when the 'charge' button is clicked to start the roasting process, a confirmation pop-up screen will appear. After approval is given, the hopper lid will automatically open.

- Drum Gate Time: This value determines the duration for which the drum door remains open. In fully automatic systems, when the 'Final' button is clicked to end the roasting process, a confirmation pop-up screen will appear to ask whether to save the profile or confirm the completion of the roasting. If confirmation is given by clicking "Yes" without saving the profile, the drum door will open. If the "Save Profile" option is selected; pop-up screen appears to save the profile and drum door will automatically open.

- Mixer Cooling Time: The running time value of the mixer fan motor to cool roasted beans down. In automatic and fully automatic systems, mixer and mixer fan are activated automatically after ending the roasting phase by clicking “Final” button.

Additional Remark: After clicling “Final Button”, mixer and mixer fan will be automatically activated. Once the set time up, mixer fan is deactivated and mixer keeps working for discharging beans from cooling tray. Mixer must be turned off manually.

- Destoner Acc Time: The running time value of the revving time of the destoner motor to avoid blockage caused by the coffee bean mass.

Additional Remark: In fully automatic systems, after the cooling process ends, the mixer continues to operate to discharge the coffee beans through the cooling tray outlet into the destoner hopper. The aforementioned time value defines the revving time before the activation of the cooling tray outlet lid to prevent potential blockage caused by the coffee bean mass and ensure a more efficient working environment.

- RoR Time: The time interval over which it is measured and generally is calculated based on temperature changes over 30 seconds.

Additional Remark: RoR measures the rate of bean temperature increase per unit of time, allowing for precise monitoring of roast development, prevention of scorching or underdevelopment, and consistency in flavor profiles.

- Min Temp: Indicates the minimum temperature value to be seen on the graphic screen.

- Max Temp: Indicates the maximum temperature value to be seen on the graphic screen.

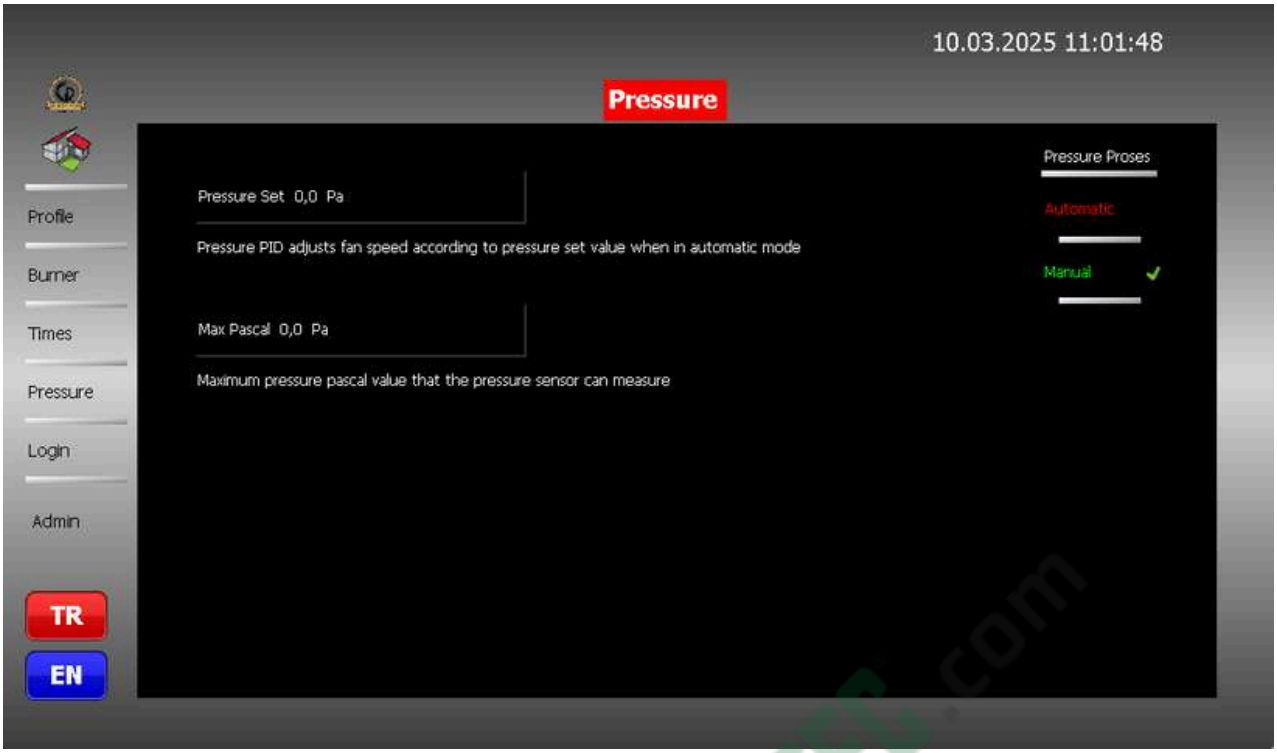
- Max RoR: The time interval of RoR value shown on the roasting graph. The desired time interval (in seconds) for displaying and updating the RoR value on the graph should be entered.

- Min Time: It is the time value that determines the desired time interval (in minutes) for displaying the roasting actions on the graph screen.

Additional Remark: For example, if the entered value is 10, the roasting profile will display actions within a 10-minute time interval on the screen. Once 1 minute passes, it will show the actions between the next 10 minutes interval (1. and 11. minute interval), and this cycle will continue until the entered max time value is reached.

- Max Time: It defines the maximum time value to be displayed on the graphic display, determining the end limit of the time interval for roasting graph. The value can be set to a maximum of 30 minutes.

If the coffee roaster machine is not equipped with fully automated systems with pneumatic doors, screen on your machine may differ.



Pressure

- In the pressure menu, maximum pressure and target pressure values can be set, as well as the selection of the process type as either automatic or manual.

- Pressure Set: The set value of the drum pressure in Pascals(Pa) desired to be maintained.

Additional Remark: The system adjusts the speed of the drum fan to keep drum pressure constant. This process is activated if the pressure process mode is selected as automatic.

- Max Pascal: The maximum pressure value in Pascal(Pa) that the pressure sensor measures.

Load Recipe:

- Click the “Load Recipe” button to recall previously saved recipes and roast with the same profile.

- When it is clicked, a pop-up screen will appear to allow you to select and recall previously saved recipe graphic.
- Click on the profile you would like to load, then click the “Load” button.

- After recalling the recipe, the selected profile chart appears on the screen as a shadow graph.
- To start roasting, firstly “Bean Set” temperature must be set; then drum and drum fun must be also activated.
- When the temperature reaches the set value, click “Charge” to begin the roasting phase.

In fully automatic roasters, the hopper lid will open automatically after clicking “Charge.”

In manual or semi-automatic systems, the hopper lid must be opened manually to load the beans into the drum.

- Golden Coffee Roasting Software follows your saved recipe and replicates pre-created actions based on selected profile.

Clear Graph:

- To clear the graphic, “Clear Graph” must be clicked

- If the burner encounters an error or fails to ignite, press and hold the corresponding button for 5 seconds to restart it. This will reset the burner.

- The “Bulb Button” is used to activate roaster lamp.

6. MAINTENANCE OF THE MACHINE

6.1. Periodical Maintenance

DANGER!
Always disconnect the roaster at the electrical source before cleaning and maintenance any motor or moving components.

WARNING!
Maintenance of the gas installation must be made by qualified staff for every year.

WARNING!
Change the gas rubber washer within one year.

Please follow the maintenance and cleaning recommendations for the machine below;

Every batch:

- Empty and clean chaffs inside chaff drawee under the drum

Every 10 batch or days after the roasting is finished;

- Empty and clean chaffs inside the cyclone Remove the cooling tray and clean chaffs inside the roaster. (See: 6.1.1)

Every 100 batch;

- Clean the surface of the cooling tray.

Every 200 batch;

- Clean pipes of the chimney Clean the burner of the roaster with a vacuum cleaner.

Every 2000 batch

- Inspection by a specialist according to the service instructions Lubricate the bearings with hot resistant grease oil.

WARNING!
To minimize the risks that could cause fire, clean and remove the coffee chaff from the lower chamber or cyclone at the end of the day's roasting.

7. DRUM ADJUSTMENT

- Due to the heating and cooling process, the drum position may change and may come frontward or backward.

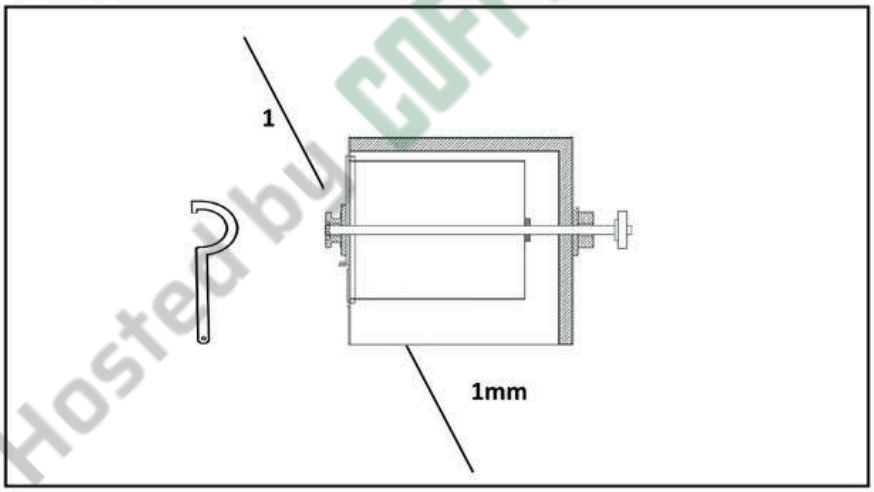
- The gap between the roaster drum and housing can be adjusted by turning the bearing located on the front of the drum cover.

- If the gap is too narrow; you may hear friction sound.

- The gap is too wide; coffee beans fall out under the drum through the drum door.

WARNING!
Do not operate the drum too long without adjusting the optimum level if you hear friction sound. It may lead to a malfunction in the drum motor.

During your roaster is heated up, please follow these steps;



- Loosen locknut on the drum bearing by a hook wrench provided by the roaster.
- Turn the bearing by hook wrench.
- If the bearing is rotated clockwise; the gap between the drum and housing increases.
- If the bearing is rotated counter-clockwise; the gap between the drum and housing decreases.

8. TROUBLESHOOTING

PROBLEM	POSSIBLE REASON	SOLUTION
Noise in the Drum	Wrong adjustment of the drum position Not enough lubricant in bearings	Adjust the drum position Lubricate bearings
Green Beans Drops Through the Drum and Housing	Wrong adjustment of the drum position	Adjust the drum position
Uneven Roast	Not Enough Roasting Different Types of Coffee in the Batch	Roast Longer Roast the different type of coffee in different batches
Roasting Period is too Long	Hopper clap may be open Wrong adjustment of exhaust fan RPM Exhaust pipe and fan is dirty Chimney pipesare dirty	Close the hopper lid Adjust exhaust RPM Clean the exhaust pipe and fan Clean the chimney pipes
Mixer is not Rotating	Mixer arm may be loosen	Tighten the mixer arm

8. TROUBLESHOOTING

PROBLEM	POSSIBLE REASON	SOLUTION
Drum motor does not work	Drum motor is on alarm	Check the voltage, contactors, and thermal relays. If contactors or thermal relays are off, turn on. If the problem continues, call our technical department.
Exhaust fan does not work	Exhaust motor is on alarm	Check the voltage, contactors, and thermal relays. If contactors or thermal relays are off, turn on. If the problem continues, call our technical department.
Mixer motor does not work	Mixer motor is on alarm	Check the voltage, contactors, and thermal relays. If contactors or thermal relays are off, turn on. If the problem continues, call our technical department.
Scorch on the door of chaff collector	Chaff collectorand chimneys are dirty	Clean the chaff collector at least once in 10 cycles.

8. TROUBLESHOOTING

PROBLEM	POSSIBLE REASON	SOLUTION
Cooling period is too long	Cooling tray is dirty Cooling fan is dirty Cooling fan pipesare dirty	Clean thecooling tray Clean the cooling fan Clean the fan pipes
Burner is not activated	Gas pressure may be low Burner airfilter may be blocked Gas filter may be blocked	Gas pressure must be 20 - 30 mbars. Clean air filter of premix burner Replace the gas filter and try again Press and hold burner reset
Burner starts but fades away after a while	Gas pressure may be low Grounding may be notenough İgnitor maybe oxidized Burner airfilter may be blocked Burner nozzle may be dirty Gas filter may be stucked	Gas pressure must be 20 - 30 Bars. Check the pressure and regulator. Clean the ignitor Clean air filter of premix burner Clean the nozzle and consider assemble a filter in the system Replace the gas filter and reset the burner

GOLDEN COFFEE ROASTERS

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