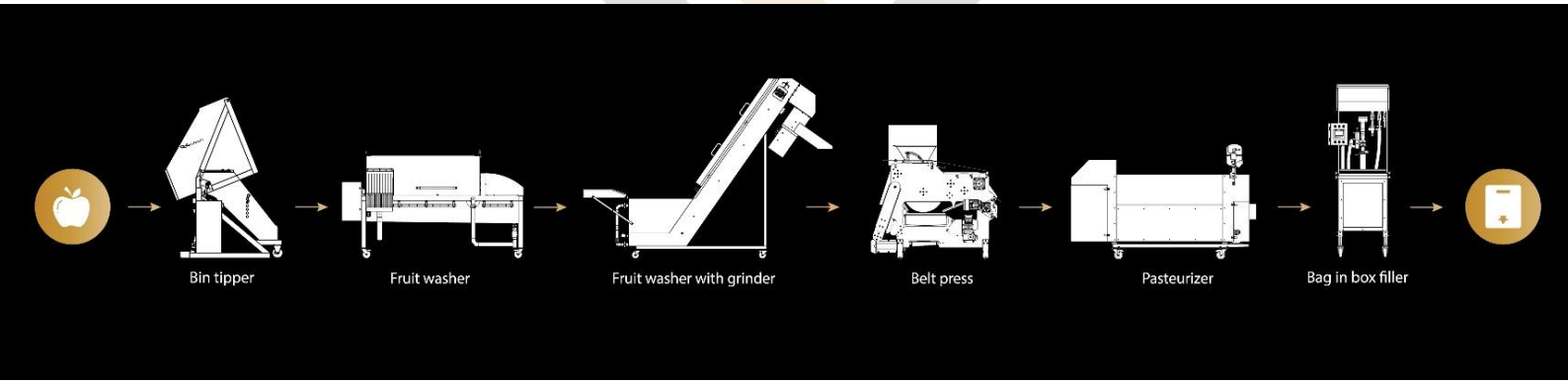
HEAT 3000

Original Instruction Document



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INFORMATION ABOUT MANUFACTURER

Manufacturer: UAB ProFruit Machinery

Representator: director Pijus Lopata

Address: Razes g. 27, Peskojai v., LT-92385 Klaipėda county, Lithuania

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1.1. Warning signs

There are special warning and prohibition signs put on the machines which are meant to inform the user about danger and keep everyone – people and machinery – safe at all situations. The meaning of each sign is described below.

Control console. High voltage

Headers required

Work shoes required

The risk of limb injury.

It is mandatory to remain alert and protect the limbs.

The risk of limb injury.

Moving parts of the machine.

Hot surface.
Risk of getting burned.

Warning. Sharp parts of machine
Risk of limb injury.

2. GENERAL REQUIREMENTS

General instructions:

- Ambient air temperature +8...+35º C.
- Relative humidity (when temperature +25 ºC) up to 70%.
- Atmospheric pressure, kPa 84-107.
- The Law on Occupational Safety and Health of the Republic of Lithuania, the General Provisions and Safety Instructions for the Use of Work Equipment and the Laws on Occupational Safety and Health of the European Union must be observed while using the machine.

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Pasteurizer HEAT

Pasteurizer HEAT3000 is used for the pasteurization of juice and other liquid products before the filling process. The machine has a built-in heating boiler. Inside of it there is a tubular heating spiral made from stainless steel. The liquid comes into the tubular spiral which is surrounded by hot water. The heat from the water heats up the liquid immediately and eliminates the bacteria. If the boiler temperature drops below the desired level, an automatic temperature sensor notifies that and initiates the valve to close. When the desired temperature is reached again, the sensor notifies this and the valve opens up again.

Capacity: 2500 - 3000 l/h for HEAT 3000

- Maximum heating temperature – 95 ºC.
- Tubular spiral made of stainless steel.
- Spiral is integrated into the boiler which provides saving of space and prevention of heat loss when pumping the water into external heat exchanger. This saves the heating energy up to 15-20%.
- Pasteurizer has an automatic water temperature control with a digital thermostat.
- An automatic regulation of liquid temperature is implemented into pasteurizer. It helps to easily change the liquid temperature (filling temperature) on the digital display.
- Automatic valves and temperature sensor
- Pasteurizer is mounted on pivoting wheels.
- Fast and easy cleaning.
- Possibility of using diesel or gas.(On request)

Attention! It is mandatory to wash off the device before starting it for the first time.

It is important to eliminate any manufacturing residues and the dust which has built up on the surface, taking care not to wet the electrical parts and keeping the power supply cable disconnected.

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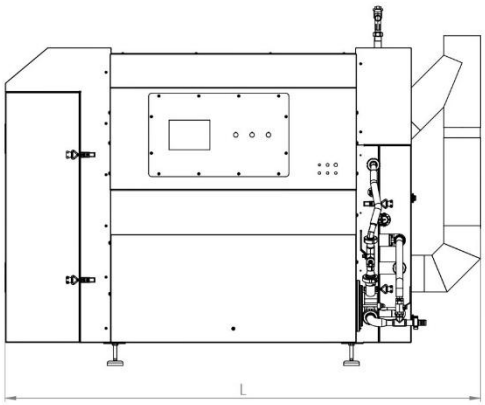
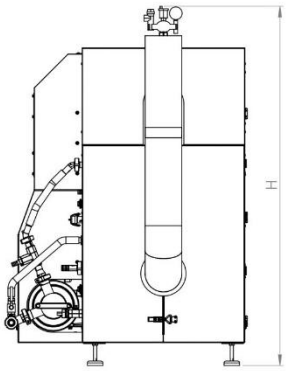
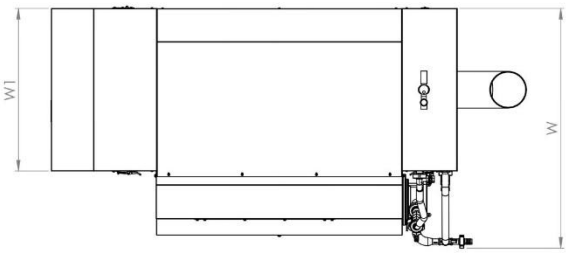
Machinery specification and drawings







PROFRUIT -MACHINERY-	Machine	Diesel Pasteurizer
	Type	HEAT 3000

Capacity	l/h	2500-3000
L	mm	2328
W	mm	1176
W1	mm	797
H	mm	1761
Max heating temp.	C	90
Weight	kg	900
Fuel consumption	l/h	18-24
Supply source	kW	2.2
Supply voltage	V	3/N/PE ~ 400 V 50Hz

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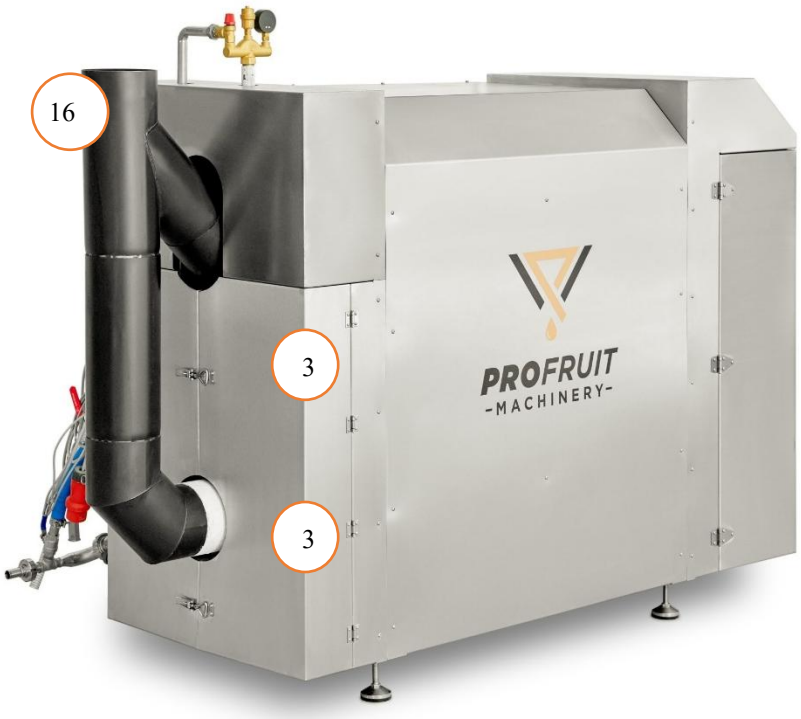

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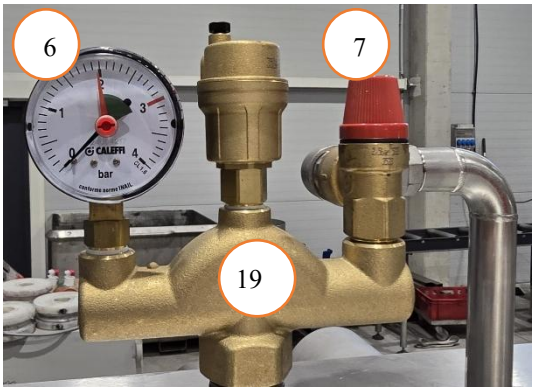

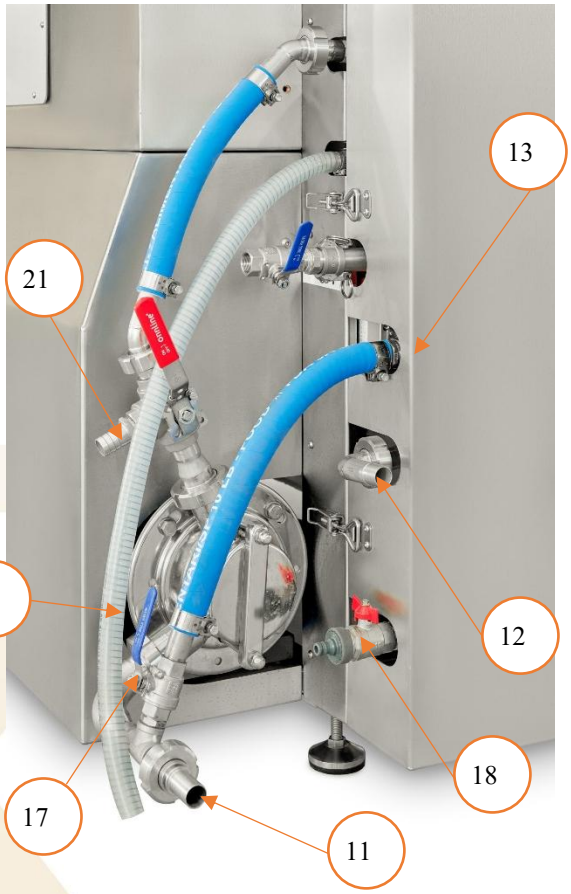

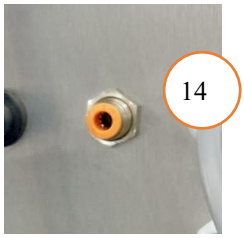

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1.	Central command panel
2.	Adjustable feets
3.	Water circulation pump (***Under protective cover***)
4.	Juice pump
5.	Air expansion tank (***Under protective cover***)
6.	Pressure gauge
7.	Overpressure valve
8.	Washing ball valve
9.	Washing ball valve handle (***When washed with water***)
10.	Burner with a lid
11.	Juice inlet valve
12.	Juice outlet valve
13.	Pneumatic three-way valve (***Under protective cover***)
14.	Air Compressor connection valve
15.	Diesel/Gas supply connection (under the burner lid or on the side of the machine for gas supply)
16.	Chimney vent
17.	Juice circulation valve
18.	Water connection valve
19.	Safety group with pressure valve
20.	Main switch
21.	Washing ball outlet valve
22.	Deaeration hose

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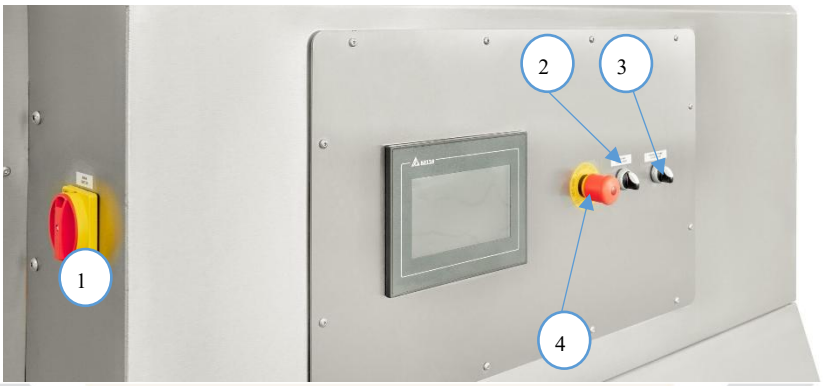
Instruction for main control panel



- The **MAIN SWITCH (1) –** on the side of the machine turns the machine ON.
- The switch **HEATING START/STOP (2) –** Starts the system and ignition of burner.
- The switch **JUICE PUMP START/STOP (3) –** Turn on the pump to supply juice into pasteurizer. Pump must be started only when juice is connected and supplied to juice inlet.
- **EMERGENCY STOP (4)** – stops the machine at all times. After emergency is fixed, you have to pull the button back.

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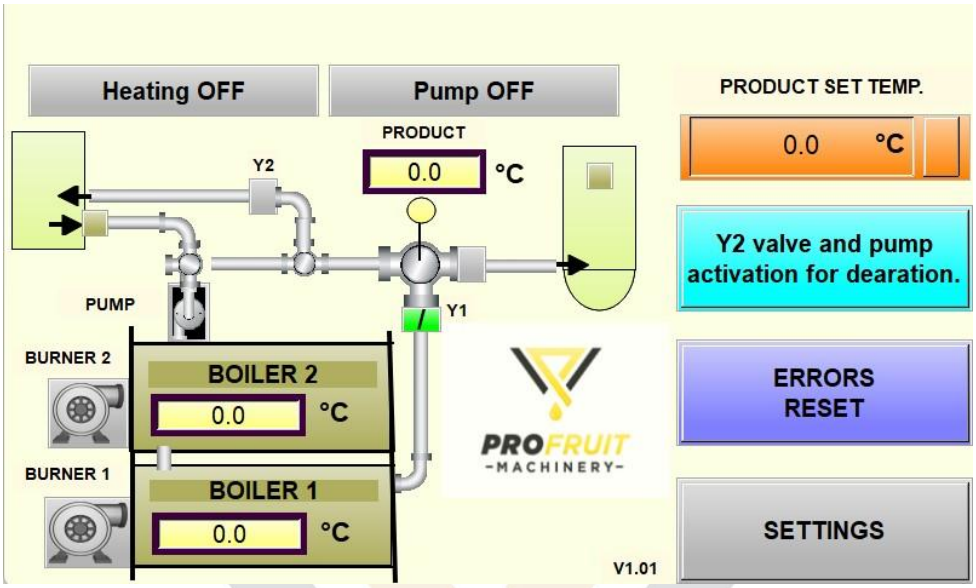
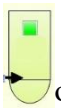
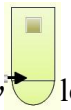
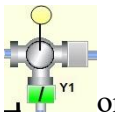
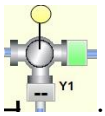
Menu screen Instructions



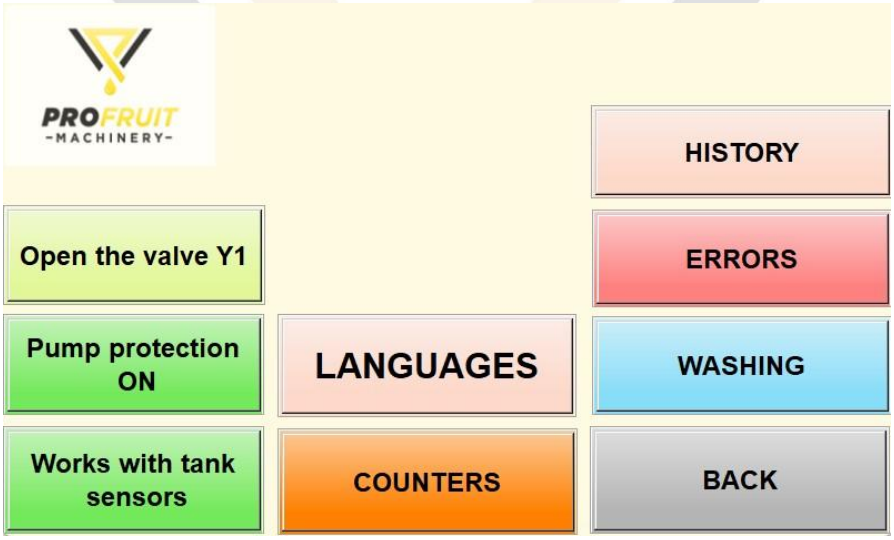
1.1 Fig. Main menu

- **PRODUCT SET TEMP -** sets the liquid temperature.
- **ERRORS RESET -** resets all the errors, Need to press ERRORS RESET every time when machine is turned on.
- **HEATING OFF/ON -** shows whether the heating is on or off.
- **PUMP OFF/ON -** shows whether the pump is on or off.
- **BOILER 1 -** shows current boiler(water) temperature.
- **BOILER 2 -** shows current boiler(water) temperature.
- **BURNER 1 -** shows if burner is on or off.
- **BURNER 2 -** shows if burner is on or off.
- **(LEVEL SENSORS) –** indicates whether the level sensor detect a ***high***  or ***low***  level. When the product level in the tank reaches the ***high level***, the pasteurizer automatically stops.
- **PUMP** – shows if pump is working  or its not working  .

- **(PNEUMATIC THREE-WAY VALVE) –** shows if pneumatic valve is in juice circulation mode (down)  or if it is open (right)  .

- **Y2 valve and pump activation for dearation -** When the button is touched and held for 2 seconds, the product pump is activated and the Y2 valve opens, allowing the product mixed with air to be discharged. Continue holding the button until no air bubbles are visible in the outgoing product stream. Once the flow is free of air, release the button to complete the deaeration process.

After you press button **SETTINGS (1.1 Fig.)**, a new window opens up and it is possible to choose other settings (**1.2 Fig.**).



1.2 Fig. Settings

- **OPEN THE VALVE Y1 –** Manually opens the pneumatic valve to supply juice out of juice outlet valve. (When the juice outlet valve is opened manually by pressing this button, the automatic temperature-controlled juice discharge is disabled. Once the valve is closed again, the system returns to automatic operation based on the set product temperature).

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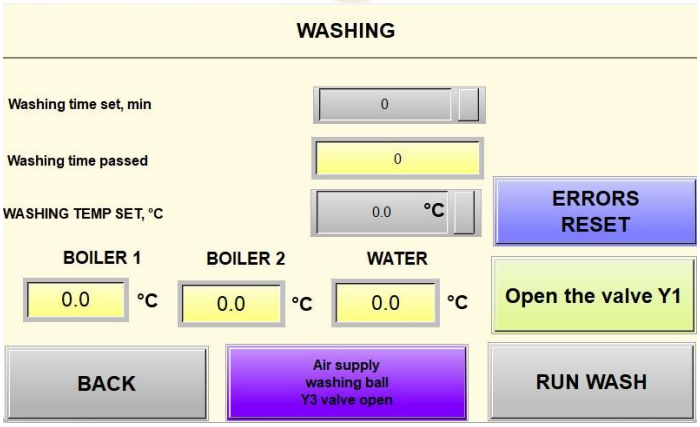
- **WORKS WITH/WITHOUT TANK SENSORS –** when pressed WORKS WITH TANK SENSORS pasteurizer must be connected with a HDC connection with a filler buffer tank for automatic work. When pressed WORKS WITHOUT TANK SENSORS pasteurizer will supply juice according to the set temperature.
- **LANGUAGES -** Changes the system language and changing temperatures in degrees or Fahrenheit.
- **ERRORS –** You can see error messages of the machine.
- **COUNTERS –** You can check machine total working time.
- **WASHING –** Washing menu. You can set washing time and temperature for CIP washing, open the valves.
- **HISTORY -** When a USB drive is inserted into the internal USB port of the touch screen, the device begins recording and storing the filling history.
- **PUMP PROTECTION ON/OFF -** When *Pump Protection* is **ON**, the sensor located on the product inlet pipe monitors the presence of liquid. If no liquid is detected, the system automatically stops the process to prevent damage to the pump impeller. When *Pump Protection* is **OFF**, the sensor is disabled. If the product runs out, the pump will continue operating, and the impeller may be damaged if it runs dry for an extended period.

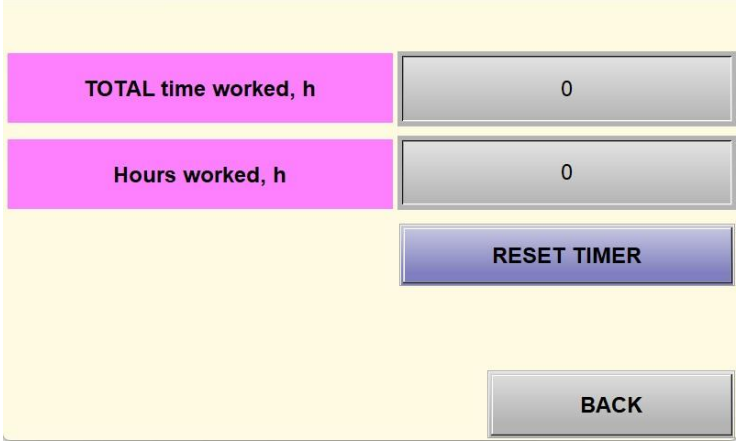
After you press button **WASHING (1.2 Fig.)**, a new window opens where you can choose the desired cleaning program for the device. (**1.3 Fig.**).



1.3 Fig. Washing

- **Washing time se, min** – Sets the duration for how long the device will be washed.
- **Washing time passed –** Displays the amount of time that has elapsed since the washing cycle started.
- **WASHING TEMP SET, °C –** Selects the desired temperature at which the pasteurizer will be washed.
- **ERRORS RESET** – Resets active errors. If the pump impeller protection is enabled, an error may appear indicating that no product is detected. This can occur if a valve is closed and water cannot enter the system, or if the water supply has run out.
- **OPEN THE VALVE Y1 –** Manually opens the pneumatic valve to supply juice out of juice outlet valve. (When the juice outlet valve is opened manually by pressing this button, the automatic temperature-controlled juice discharge is disabled. Once the valve is closed again, the system returns to automatic operation based on the set product temperature).
- **RUN WASH –** Starts the washing cycle once all required parameters (washing time and washing temperature) have been entered.
- **AIR supply washing ball Y3 valve open –** AIR Supply Washing Ball – Y3 Valve Open When the washing ball is inserted into the pipe and the nozzle is placed in position, press and hold this button to open the Y3 air valve. Keep holding until the washing ball is pushed out of the pipe by the air pressure. (**Refer to the full washing ball cleaning procedure on page 25).**

After you press button **COUNTERS (1.2 Fig.)**, a new window opens (**1.4 Fig.**).



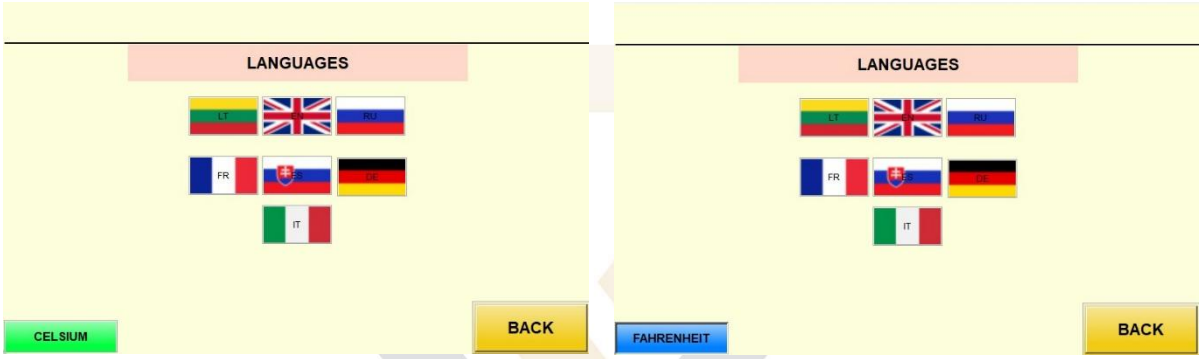
1.4 Fig. Counters

TOTAL time worked, h – Displays the total number of hours the machine has been in operation.

Hours worked, h – Displays the number of operating hours accumulated since the last timer reset.

RESET TIMER – Allows resetting the accumulated working hours. This function can be used to track the number of hours worked per day or per shift.

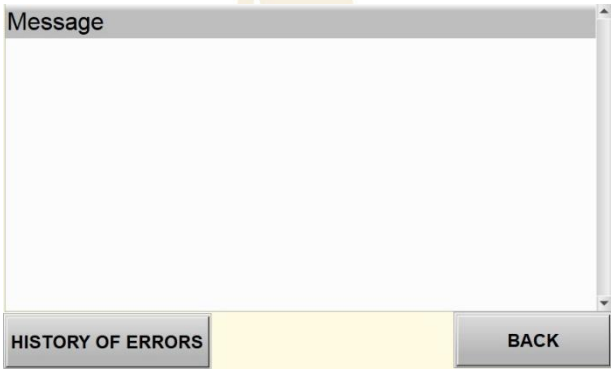
After you press button **LANGUAGES (1.2 Fig.)**, a new window opens (**1.5 Fig.**).



1.5 Fig. Languages

- Temperature selection in **Celsius** or **Fahrenheit**

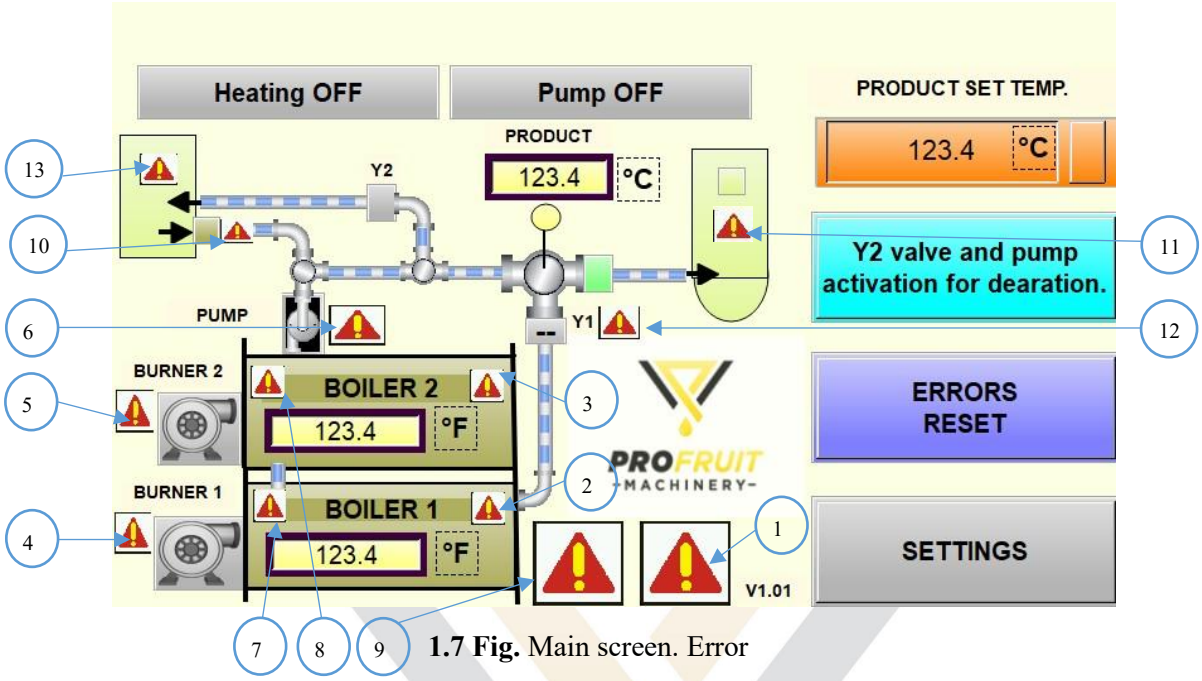
After you press button **LANGUAGES (1.2 Fig.)**, a new window opens (**1.6 Fig.**).



1.6 Fig. ERRORS

- **History -** a history of active and past errors (**1.6 Fig.**).

Displaying errors on the main screen. Error meanings and troubleshooting



1.7 Fig. Main screen. Error

- **Emergency button Pressed (1.7 Fig. – 1) –** Check and turn off the emergency stop button **(page 7 – 4)**.
- **Overheat thermostat 1 fault (1.7 Fig. – 2)** – The pasteurizer **boiler1** has reached over 100 degrees. It needs to be cooled down to 80 degrees and the error reset.
- **Overheat thermostat 2 fault (1.7 Fig. – 3) –** The pasteurizer **boiler2** has reached over 100 degrees. It needs to be cooled down to 80 degrees and the error reset.
- **Burner 1 fault (1.7 Fig. – 4) –** Indicates that the **burner 1** fails to start for some reason. Check the **F3 (Fig. 1.9)** breaker inside the electrical cabinet to see if it has tripped. Visually inspect the burner area to ensure there are no damaged or disconnected wires. Check whether the fuel supply has run out or is insufficient. If the issue does not resolve after these checks, contact the manufacturer for further assistance.
- **Burner 2 fault (1.7 Fig. – 5) –** Indicates that the **burner 2** fails to start for some reason. Check the **F4 (Fig. 1.9)** breaker inside the electrical cabinet to see if it has tripped. Visually inspect the burner area to ensure there are no damaged or disconnected wires. Check whether the fuel supply

has run out or is insufficient. If the issue does not resolve after these checks, contact the manufacturer for further assistance.

- **Product pump fault (1.7 Fig. – 6) –** Indicates that the product pump fails to start. Check the thermal relay **Q2 (Fig. 1.9)** in the electrical cabinet. If the relay has tripped, reset it, clear the error on the main screen, and attempt to start the pump again. If the fault repeats, check whether the pump motor impeller rotates when the pump is started. If it does not rotate, disassemble the pump impeller and inspect for any obstruction preventing movement. If no cause is found, contact the manufacturer for further assistance.
- **Circulation pump 1 fault (1.7 Fig. – 7) –** Indicates that the **circulation pump** 1, which mixes water inside the boiler, fails to start. Check the **F1 (Fig. 1.9)** breaker inside the electrical cabinet to see if it has tripped. If the error remains after resetting the breaker, the pump motor may be damaged. For detailed diagnostics and repair instructions, contact the manufacturer.
- **Circulation pump 2 fault (1.7 Fig. – 8) –** Indicates that the **circulation pump** 1, which mixes water inside the boiler, fails to start. Check the **F2 (Fig. 1.9)** breaker inside the electrical cabinet to see if it has tripped. If the error remains after resetting the breaker, the pump motor may be damaged. For detailed diagnostics and repair instructions, contact the manufacturer.
- **Press reset faults (1.7 Fig. – 9) –** Indicates that one or more active faults have not been reset. Reset the errors from the main screen; the fault message should disappear. If another fault is still active, this reset cannot be completed until the underlying issue is resolved.
- **Out of product (1.7 Fig. – 10) –** Indicates that the product has run out. A sensor located at the machine inlet activates this fault when no liquid is detected. If you are certain that the product has not actually run out, check the following:
    - Ensure that no valve is closed and that the product can reach the machine.
    - Verify that nothing is blocking the product flow into the system.
    - Check whether the sensor cable is properly connected.

  If the issue persists after these checks, contact the manufacturer for further assistance.
- **Error 11 (Fig. 1.7) -** Indicates that the setting **"Work WITHOUT TANK SENSORS"** is enabled. Operation is still possible; however, this warning reminds the operator that the machine

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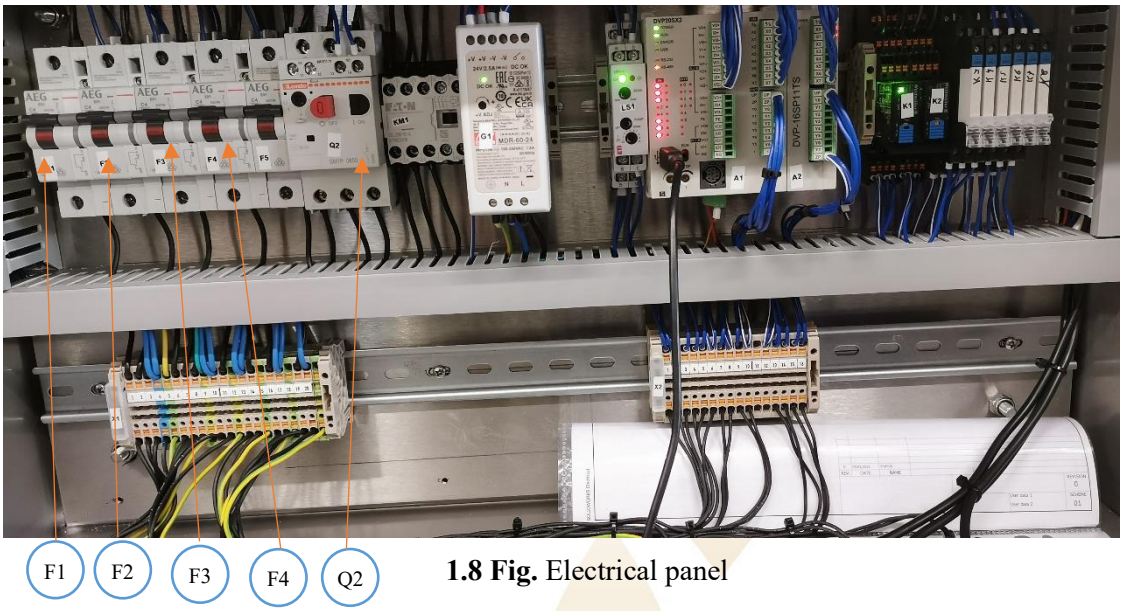
is running in **manual mode**, where the product may overflow into the supply tank during pasteurization.

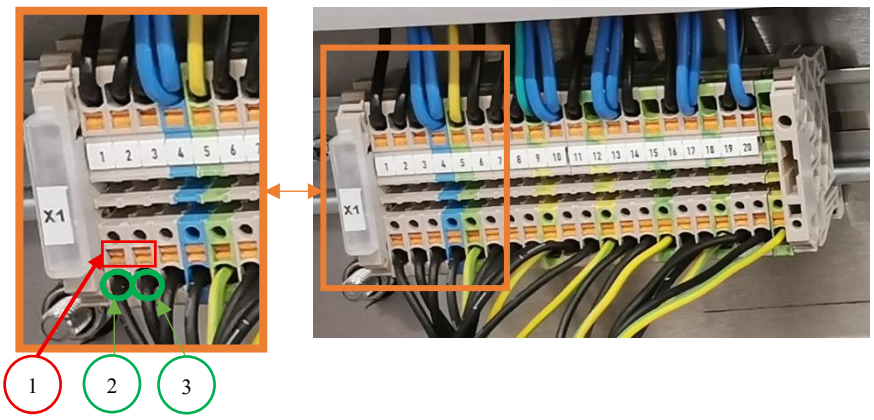
- **Error 12 (Fig. 1.7) –** Indicates that the setting to **open the juice discharge valve Y1** is enabled. While this function is active, automatic juice pasteurization is disabled. This mode is used when flushing the machine with clean water.
- **Error 13 (Fig. 1.7) –** Indicates that the pump protection function is disabled in the settings. Enable the pump protection to clear this warning.

Electrical panel



1.8 Fig. Electrical panel

If the juice pump is rotating in the wrong direction, the pump will not supply the product correctly. To change the direction of rotation of the pump, swap the power phases. Swap the wires of contacts **1** and **2** in row X1 **(2 and 3/1.9 Fig.)**. To remove the cable, press the orange part **(1/1.9 Fig.).**



1.9 Fig. Swap two phases

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Disturbances / Errors – Possible Causes and Remedies

- **Machine Does Not Function**

  Possible reason(s):

  - Missing electrical phase
  - Electrical phases swapped
  - EMERGENCY switch is pressed

  Remedy:

  - Have a qualified electrician check the phase connection.
  - Unlock the EMERGENCY switch and press **Errors RESET**.

- **Burner Issues burner does not ignite**

  Possible reason(s):

  - Insufficient fuel supply

  Remedy:

  - Check the fuel level and fuel supply line.
  - If the fuel system appears functional, contact your local heating systems specialist.

- **Burner ignites but extinguishes shortly after**

  Possible reason(s):

  - Insufficient air supply to the burner

  Remedy:

  - Check the chimney for blockage.
  - Adjust the burner according to the chimney installation with a certified heating systems specialist.

- **Pump Problems**

  Pump is running but not supplying juice

  Possible reason(s):

  - Damaged rubber impeller (often caused by running dry)

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Remedy:

- Replace the impeller.
- Ensure the pump operates only when there is juice inside the system.

➢ **Overheat Thermostat Activated**

Possible reason(s):

- Boiler temperature exceeded **102°C**
- Incorrect temperature setting
- Hysteresis value set too high (*Older Machine Versions*)

Remedy:

- Check the boiler temperature setting.
- Verify that hysteresis is set correctly (*Older Machine Versions*).
- Allow the system to cool down, reset the thermostat, and restart operation.

Troubleshooting must only be carried out by an authorized and qualified person, with the right and appropriate skills and training for the job.

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Assembly, connection and installation of the machine

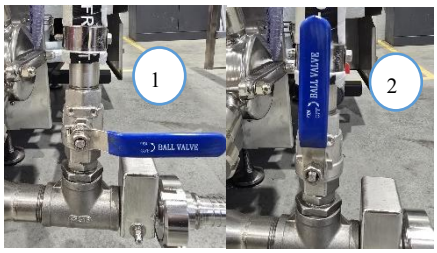
Steps to accomplish in order to start working with the machine:

- Connect diesel/gas fuel supply to the supply connection inlet.
- Connect water hose to the water connection valve **(Page 7 – 18)**.
- Turn on the water until safety circuit with pressure valve shows the pressure between 1 bar. Then turn off the water. The air vent on the safety group must be opened during boiler filling to ensure that no air remains trapped inside the boiler. If air is not released properly, the system may lose efficiency and overall performance may decrease **(Page 7 – 19)**.
- Connect the air compressor to the air compressor connection inlet, tube diameter – 6mm. Needed air pressure – 6 bar **(Page 7 – 14)**.
- Make a chimney connection unit from the chimney vent **(Page 6 – 16)**.
- Connect the juice supply hose, which comes from your juice tank, to the juice inlet valve **(Page 7 – 11)**.
- Connect the juice outlet hose to the juice outlet connection **(Page 7 – 12)**.
- Turn the handles of the juice circulation valve **(Page 7 – 17)** and washing ball valve **(Page 7 – 21)** into the working mode – vertical position.

1.10 Fig. Washing ball valve

1 – Cleaning Ball Position (Valve) **(1.10 Fig. – 1)**;

2 – Working Position (Valve) **(1.10 Fig. – 2)**.



1.11 Fig. Juice circulation

1 – Juice Circulation Valve Position – System dearation Mode **(1.11 Fig. – 1)**;

2 – Working Position (Valve) **(1.11 Fig. – 2)**.

- Insert the power cord into the three-phase connection.

Gas or Diesel connections and settings

Before using the pasteurizer, we highly recommend to contact your local diesel or gas heating specialist, to preset the burner and whole system accodring to your room, chimney connection and length. Burner is often needed to be adjusted on the place according to customer premises, then better efficiency and fuel consumption can be achieved.

- **For Diesel** - Connect the 13mm diesel hose connection from your diesel storage tank to the diesel filter nearby the burner. Before connecting hose must be full of diesel.
- **For Gas –** Connect the hose with a red reducer on the end to your Gas storage tank/system.

HEAT 3000 pasteurizer

Diesel burner (Model Giersch R20) and pasteurizer is preset according to burner manufacturer instructions on these setttings(Marked in Yellow):

Burner output [kW]	Boiler output where ηk = 92% [kW]	Nozzle size [USgal/h]	Nozzle spray angle [°]	Oil pump pressure* [bar]	Oil throughput [kg/h]	Nozzle stem position dimension "A" [mm]
40	37	0.75	60°S	13	3.4	13
45	41	0.85	60°S	13	3.8	15
55	51	1.00	60°S	13	4.6	16
60	55	1.10	60°S	13	5.1	18
65	60	1.25	45°S	13	5.5	19
75	69	1.35	45°S	13	6.3	20
85	78	1.50	45°S	13	7.2	22
95	87	1.75	45°S	13	8.0	23
110	101	2.00	45°S	13	9.3	26
125	115	2.25	45°S	13	10.6	29
140	129	2.50	45°S	13	11.8	32
150	138	2.75	45°S	13	12.7	39
165	152	3.00	45°S	13	13.9	50

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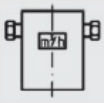
GAS (LPG) burner (Model Intercal SGNF 120H) and pasteurizer is preset according to burner manufacturer instructions on these setttings (Marked in Yellow):

 Burner type	 Power kW	 Gas flow rate [m³/h]	 Blower pressure [mbar]	 Nozzle pressure [mbar]	 Air inlet nozzle	 Furnace pressure [mbar]
SGNF 120H	65	2,5	3,4	2,6	4,0	0,2
	80	3,1	4,1	4	4,0	0,25
	95	3,7	6,4	6,3	4,0	0,30

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Instructions for using the machine

- Turn on the machine with the main switch **(Page 9 – 1)**.
- After the control panel screen turns on, press ERRORS RESET so the work can be started.
- Choose the required juice temperature in the main screen (for juice the recommended temperature is 77 - 80 degrees, maximum temperature is 90 degrees Celsius).
- Choose the position START with the switch SYSTEM START/STOP **(Page 9 – 2)**.
- Open the juice tank valve to supply juice into pasteurizer.
- Choose the position START with the switch JUICE PUMP START/STOP **(Page 9 – 3)**.
- After the boiler turns on, and juice circulates wait until the boiler and juice reaches the required temperature.
- When waiting, close the juice circulation valve **(1.11 Fig. – 1 – System dearation mode)** and press **Y2 valve and pump activation for dearation** button on screen **(1.1 Fig. – page 10)**. When the venting valve opens, the product mixed with air is discharged from the internal coil through the dearation hose **(Page 7 – 22)**. Once the juice flows through the valve **without air**, release the **dearation** button on the screen and set the valve to **Working Position (Valve) (1.11 Fig. – 2)**.
- Pasteurizer now will work automatically, when juice will reach the set temperature it will supply the juice out of pasteurizer.

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Deaeration process

It is possible that some air can get stuck or withhold in the internal spiral of the pasteurizer. In this situation come troubles can occur and the flow of the liquid can be disturbed. This is why everytime before using the machine the deaeration valve should be opened up until the liquid starts to flow.

Safety mechanisms

- **Safety circuit with pressure valve** – safety circuit controls, ventilates and secures the machine from too much pressure.
- **Safety after in case of a sudden black-out –** when the power supply is suddenly cut off or a similar situation happens, the machine is turned on normally and does not cause any dangerous situations like sudden start or improper operation.
- **Safety of electronical pieces –** all the electronical pieces are installed in the internal part of the central command box and shielded with the protection lid. The protection lid that ensured IP 22, can be opened only with a special key.
- **Burner protector –** a protector is built into the burner of pasteurizer that protects the machine from overheating danger. In case of occurred error, increased pressure or temperature, the protector automatically turns the burner off and does not let continue work until the error is safely solved.

The workplace of operator

- The pasteurizer is controlled by one person.
- The workplace of an operator is in front of the control panel.

Setting the air pressure

To set the air pressure, it is necessary to complete the following steps:

- Turn on the compressor.
- Connect the compressor to the compressor inlet valve.
- The normal air pressure for the pasteurizer is around 5-6 Bar
- If the pressure is different, use the compressor to adjust the pressure.

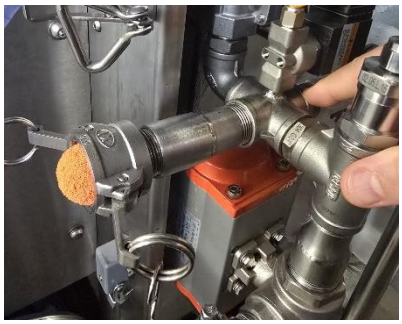
The washing of machine

The washing of the machine is only internal and must be done in two ways:

1. Washing with the sponge ball
   - Turn off the machine
   - Turn the washing ball valve to horizontal position **(1.10 Fig. – 1)**.

   - Remove the cleaning valve connection.

   - Inserted the orange cleaning ball is pushed into position using a tool inserted behind the plumbing four-way junction, approximately **15 cm** from the point indicated by the finger in the photo.



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- Connect water hose to the washing valve and open it.


- Turn on the water from your water source.
- Wait until the sponge ball is flushed out from the washing ball valve.

- Repeat this process until the water coming out together with the ball is completely clean.

Washing with Cleaning Ball and Compressed Air

The entire washing procedure with the cleaning ball is performed using **compressed air instead of water**. This is done to ensure that the internal coil is cleaned and dried thoroughly. The procedure is identical to the standard washing cycle, except that **no water is connected to the washing valve**.

Once the cleaning ball is inserted and the ball outlet valve is open, go to the washing menu and press **(1.3 Fig. – Washing – AIR supply washing ball, Y3 valve open)**. Hold the button until the cleaning ball is pushed through the internal coil and exits through the washing valve.

WARNING – ALL WASHING PROCESS MUST BE DONE WITH A MASK AND HEAT RESISTANT GLOVES AND CLOTHES OR ACCORDING TO THE CLEANING DETERGENT MANUFACTURER RECOMMENDATIONS

2. CIP circulation washing

- Fill your separate liquid tank with water. It is recommended to pour into the water some alkaline detergent that is suitable for the food industry. Detergent dosing should be used according to detergent manufacturer instruction. There should be about 50 liters of water in the tank.
- Connect your separate liquid tank to the pasteurizer juice inlet connection.
- Pasteurizer juice outlet connection must be connected back to the separate liquid tank with water/detergent.
- Go to the WASHING MENU **(Page 12)** on the screen. Set washing time to – 15 min, temperature – 50C (If alkalines manufacturers does specify differently). Press **RUN WASH** (if applicable on the screen)
- Turn SYSTEM START and PUMP START switches.
- Start the washing process.
- When there will be 3 minutes left until the end of the washing process, transfer the end of the hose coming from juice outlet from your separate liquid tank to sewer/wastewater trap/outlet in such manner so the running water would not disturb or harm any people or mechanisms.
- When the washing process is done, fill in your separate liquid tank with around 100 liters of clean water.
- Transfer the end of the hose coming from juice outlet from your separate liquid tank to sewer/wastewater trap/outlet in such manner so the running water would not disturb or harm any people or mechanisms.
- Rinse the whole system with clean water by pressing – **OPEN THE VALVE Y1 (1.2 Fig. – OPEN THE VALVE Y1)** button and PUMP START.
- Finish the washing process.

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Pasteurization process

- The Juice from your separate juice tank enters the machine through the juice inlet valve.
- The liquid is immediately heated by hot water inside the stainless steel spiral.
- The pasteurized liquid comes out through the juice outlet valve

Conditions for using the machine

- The machine, its workplace and ground must be kept clean, neat and properly always lit when using it.
- A higher than 1,9 m room or using area is required.
- The area around the machine needs to be empty so machine would not be bothered with any interference.
- The machine is operated by one person who has passed his training with the machine and is familiar with all the instructions and risks.
- Flat, stable and solid ground is needed for machine, the ground must hold 900 kg weight. This stable ground is always obligatory: when using the machine, during transportation, assembly, dismantling, testing, foreseeable failure or non-usage periods.
- When transporting, lifting or storing the machinery the client is obligated to assure its safety and proper fastening.

Safety requirements

- If some machinery failure, obstacle, accident, emergency or any other dangerous situation happens it is obligatory to stop, shut down the machinery immediately or operate equipment depending on the situation in order to avoid or eliminate dangers.
- The machinery can be operated only by person who has passed his training for machinery and is familiar with all the machinery instructions and risks. The person must also be in proper physical and mental state and not be affected by any substances that could interfere with normal functioning (such as pharmaceuticals, drugs, alcohol etc.).
- It is prohibited to do any activity with the machine during its working process (such as washing, transporting etc.).
- It is prohibited to wet or pour any liquids onto the central control box and engines.

- Every time before using the machine the operator must carefully inspect the machine, check if all the parts and electronical buttons are in place and working properly as well as examine if the equipment meets all the safety requirements and is prepared for normal work.
- The main control panel and engines can be fixed, repaired or changed only by the manufacturer or its approved repairing company. All the engineering and electronical works must also be performed by the manufacturer or its approved repairing company.

Warnings

- It is prohibited to use liquids that could damage the machine or its parts. It is prohibited to pasteurize and use any liquids that are too thick, that are not suitable for pasteurization, that are not properly processed (not filtered, contain thick particles) and are dangerous to the machine, environment and/or the other people. All the liquids that the client wants to pasteurize with this machine must be previously discussed with the manufacturer. If manufacturer advises not to pasteurize some liquid and the client still uses it, all the machinery warranty service is automatically terminated and the client takes all the responsibility for the actions and consequences.
- This diesel pasteurizer is manufactured and most suitable to pasteurize apple juice. If the machine is used for other liquids, the efficiency of the machine can differ. Depending on the liquids, additional action may be required in order to ensure the smooth work process (i. e. to use slower pasteurization mode, pay closer attention to the washing of the machine, etc.)
- It is forbidden for any people to touch, lean on or have contact in any way with the working machine, its parts, the products that are being processed or other dangerous parts because of the risk of injury. Only actions that are necessary for a proper work with the machine are allowed.
- All machinery parts, buttons and operational details must be used according to their purpose.
- Any arbitrary adjustment, repair or other mechanical modification of the machine by a non-manufacturer will result in termination of the warranty service.
- It is prohibited to climb or put things on the machine at all times.
- The machine can only be washed, lifted, transported or otherwise operated after it was switched off completely.
- The cover of the burner is opened with a special key by an operator or warranty service person.

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- The machine only works properly when all its parts are properly attached.
- The manufacturer produces and prepares the machine based on all machinery requirements and client's needs. Changing and mechanically adjusting any machinery settings without manufacturer or its approval is prohibited.

Residual risks

- The risk of sound and hearing damage due to the noise made by the device still remains even in compliance with all safety requirements.

Precautionary directions

- Before using the machine, the operator must inspect the machine for defects and meet all safety requirements. If discrepancies are found, do not use the machine until they have been eliminated.
- It is recommended to remain attentive around the machine and to keep a distance from the machine and its parts when it is not necessary.
- If the situation requires contact with parts of machinery that are hazardous to health or dangerous to environment, additional precautions must be taken: consultation with the manufacturer, usage of other equipment or tools, wearing protective gloves and other actions depending on the situation.
- It is recommended to wear clothing and footwear that is non-slip, water resistant and is appropriate for work. To reduce the risk of sound during work, it is recommended to use sound-insulating headphones.
- It is recommended to follow all additional safety requirements in order to stay safe and prevent any injuries.

Transportation of machine

- The machine is transported by truck.
- The machine is transported in one piece without separating its parts.
- During transportation the machine must be secured in such a way that its components are not damaged and the machine itself remains stable during transport.
- When transporting and otherwise moving or changing the position of the machine it must be done after it had been completely switched off, emptied and securely fastened.

- The machine must be put straight on the horizontal ground during transportation.

Machine operation in case of risk

- In the event of accident or emergency operate the machine depending on the situation: stop, shut it down, return to a safe or less dangerous position immediately and eliminate the danger.
- If the machine breaks down, switch off the machine and evaluate the failure. If the failure cannot be eliminated by yourself (such as removing the dirt, other obstacles) or it is dangerous, contact the manufacturer for warranty service, if the warranty service has expired, apply for repair.
- In case of jammed machine assess the situation, inspect the jammed part of the machine and try to solve it if there is no danger. Depending on the situation try restarting the machine or contacting the manufacturer for warranty service or repair.

Adjustment and maintenance of machine

- Inspect machine parts before every use, regularly check machinery.
- Wash the machine regularly (after each shift).

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