ggmgastro

OPERATOR'S MANUAL

Bakery oven, mini - rotary with electric or gas heating type:
WITH INTEGRATED ROTATING TROLLEY
WITH OR WITHOUT
FERMANTATIPN CHAMBER
KDP1064B-KDP1064E-GKDP1064B-GKDP1064E

Content

1.3. General view of the equipment

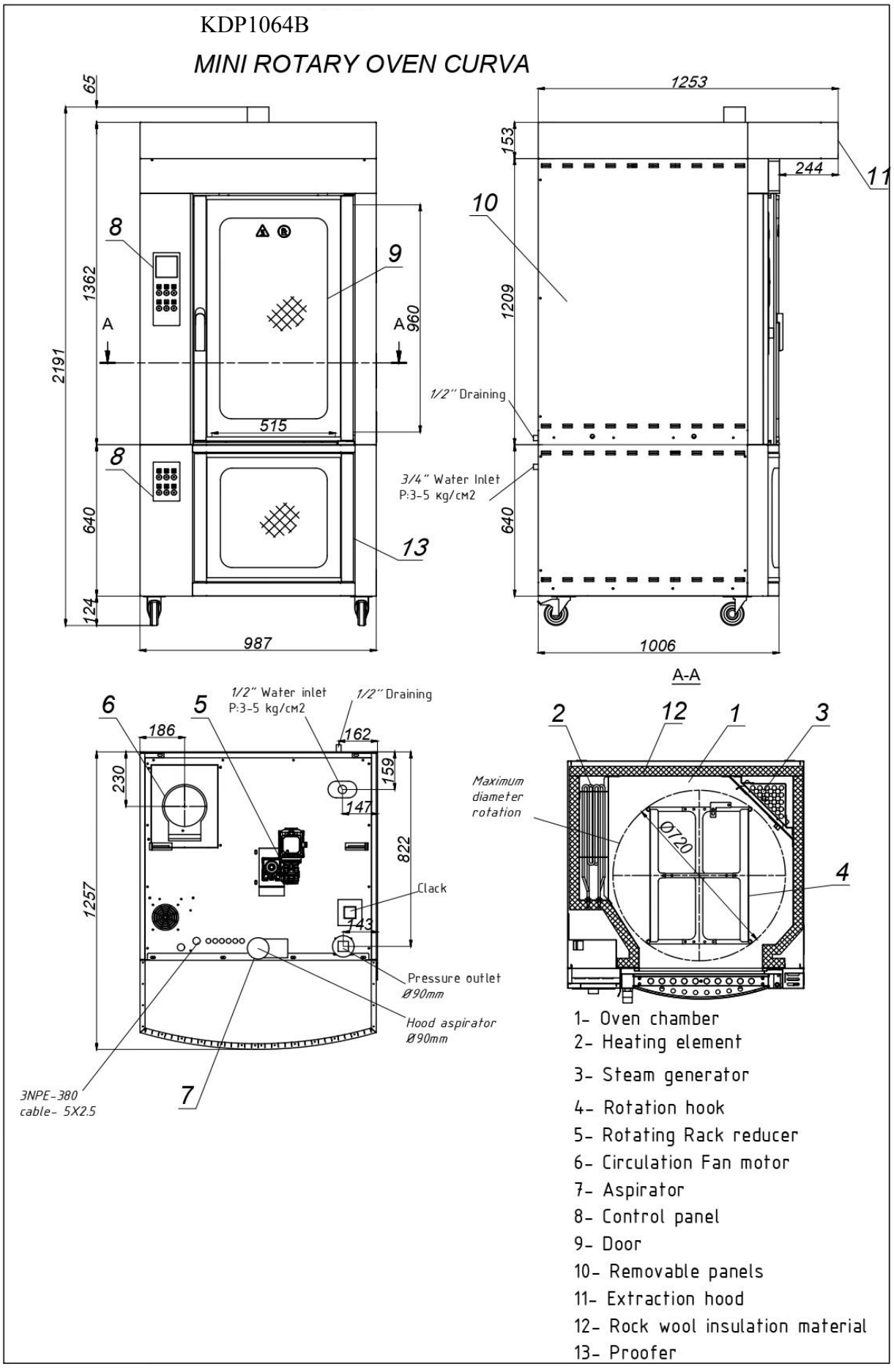
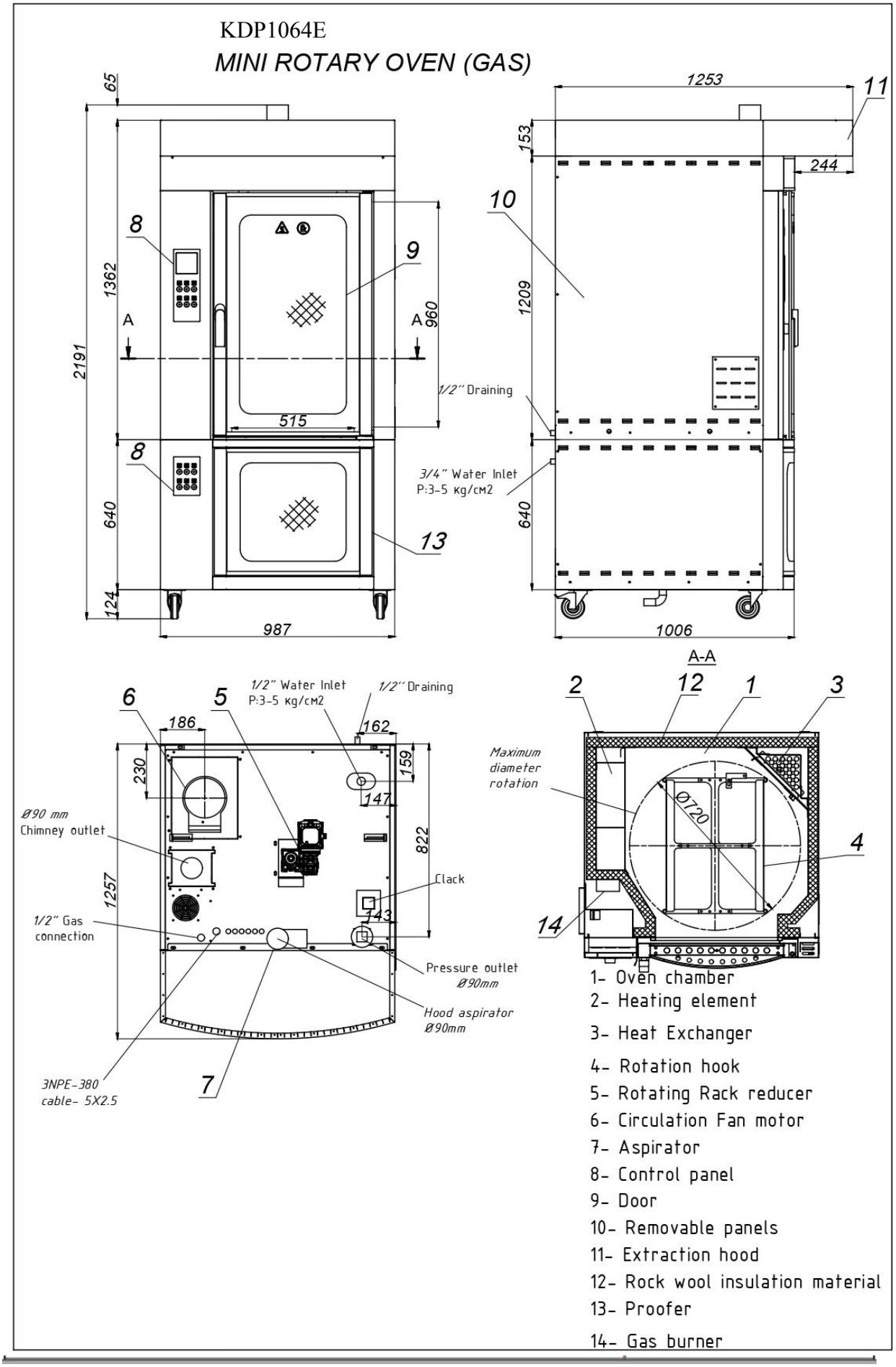
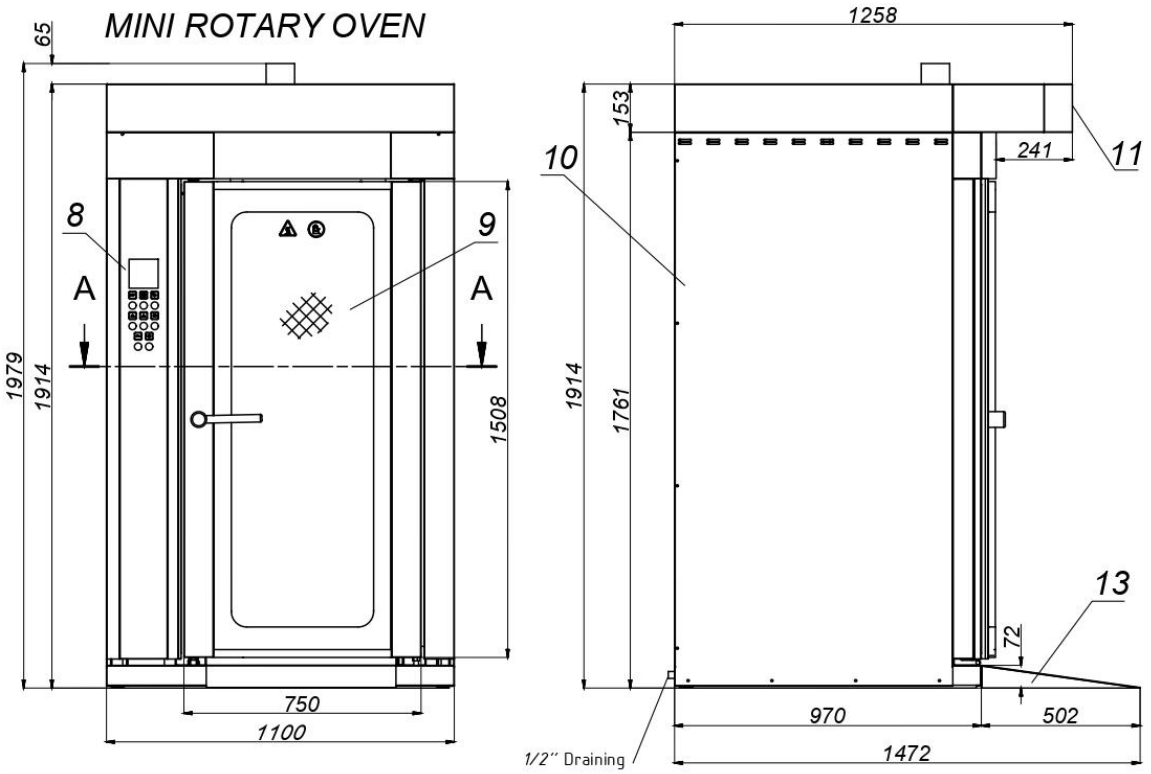


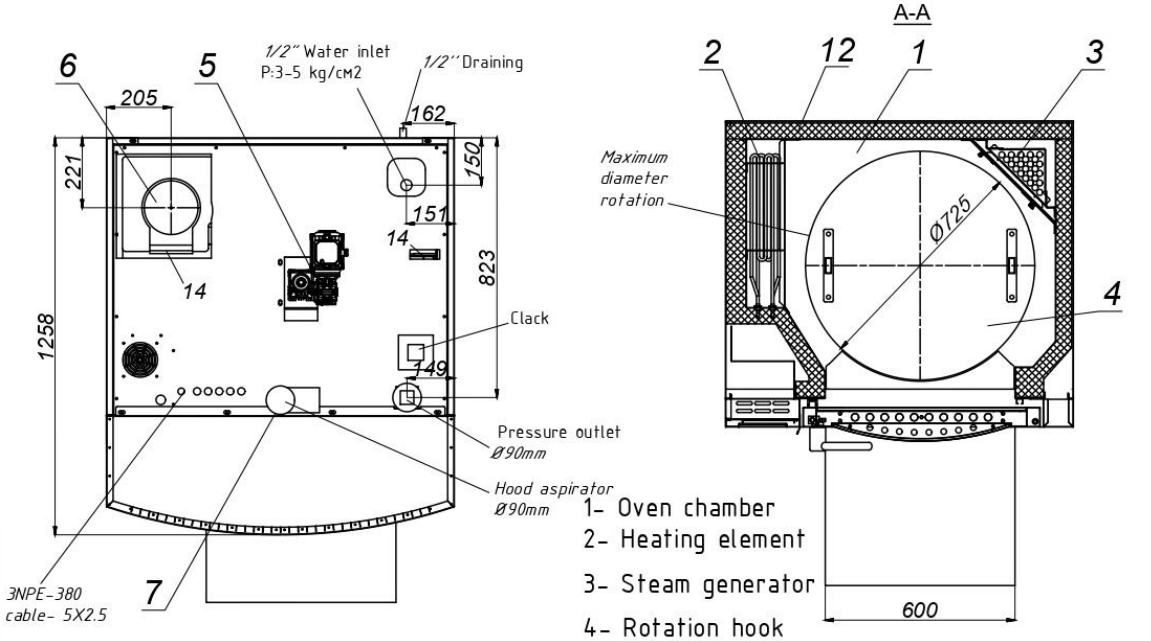
Figure 1.1 Dimensions and elements of the KDP1064E oven.



GKDP1064B

MINI ROTARY OVEN

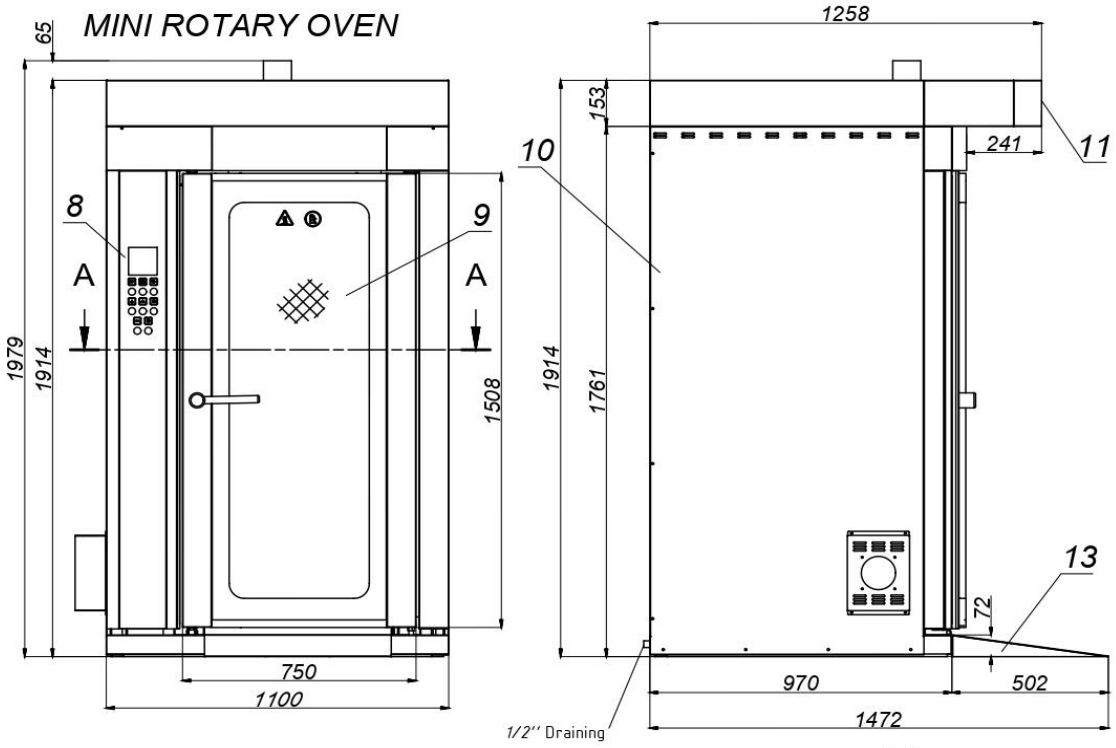


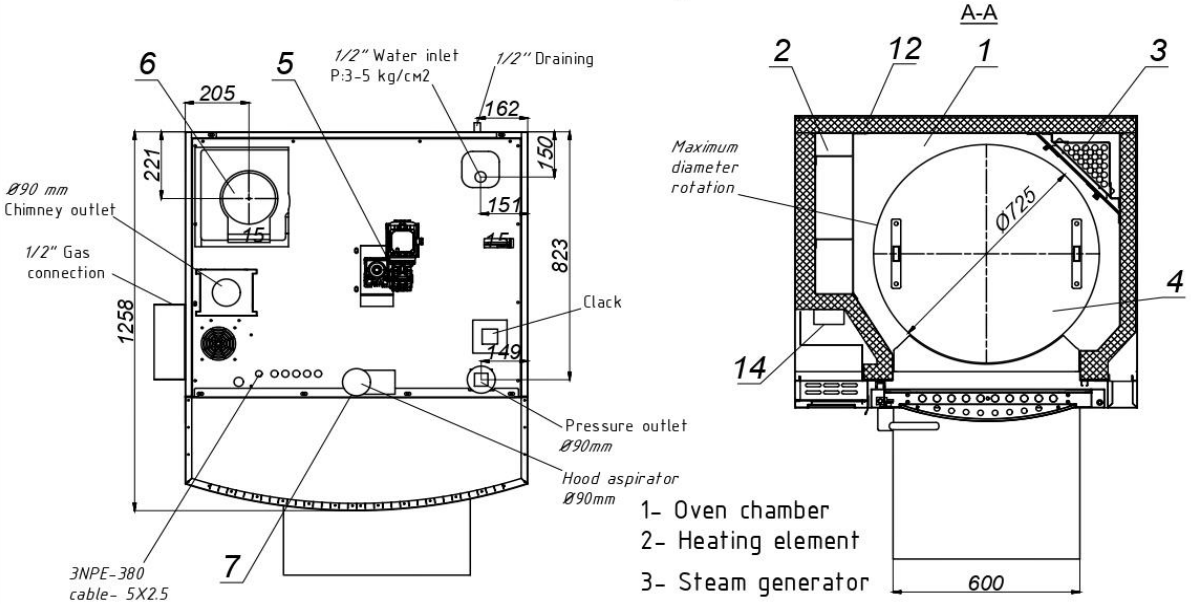


1- Oven chamber
2- Heating element
3- Steam generator
4- Rotation hook
5- Rotating Rack reducer
6- Circulation Fan motor
7- Aspirator
8- Control panel
9- Door
10- Removable panels
11- Extraction hood
12- Rock wool insulation material
13- Input ramp 14- Lifting hook

GKDP1064E

MINI ROTARY OVEN





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2- Heating element
3- Steam generator
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9- Door
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11- Extraction hood
12- Rock wool insulation material
13- Input ramp 14- Gas burner 15- Lifting hook

1.4. Product description

⚠	**The oven is only intended for baking food products such as pastries, baked goods,**
⚠	**The oven is not intended for baking any other non-food items, unless the manufacturer has specifically agreed to do so!**

The oven has a baking chamber 1 Fig. 1.1-1.4 (baking chamber), heating and air circulation systems, rack trolley rotation mechanism 4 Fig. 1.1-1.4 (Rotation platform), steam humidification system 3 Fig. 1.1-1.4 (Steam generator) and control panel 8 Fig. 1.1-1.4 (Control panel) manuel or touch screen (optional).

The baking chamber is heated by air that passes through the heating block 2 Fig. 1.1 - 1.4 (Electric heating elements or Heat exchanger). Forced air circulation is carried out by a heat fan 6 Fig. 1.1-1.4 (Fan drive).

Even baking is achieved by distributing the air flow. A group of adjustable dampers Fig. 3.2 and the rotation of the trolley. The temperature in the baking chamber is maintained automatically in accordance with the temperature set on the control panel.

Before starting work, it is necessary to preheat the oven to the temperature required for baking, taking into account the heating time of the steam generator, open the door of the baking chamber, load the baking trays with dough pieces into the trolley (fix the trolley), close the door. On ovens with analog control, it must be borne in mind that after the door is closed, the oven delay timer is activated - "Silence time" (heat fan and heating, burner, off), this function is possible only at the beginning of baking and, as a rule, is used in the process of steam humidification. When the door is opened and closed, the process is repeated from the original values.

After the end of baking, the baking trays are removed from the rack of the baking chamber.

After finishing baking and removing the trays, the oven automatically maintains the set temperature. At the end of the work, the oven must be put into cooling mode.

The identification plate (nameplate) containing the designation of the oven and other technical characteristics is installed inside the equipment behind the control panel.

The oven is serviced by a worker - a baker or a dedicated technician in the organization. Service of gas (liquid fuel) equipment (burner, gas train, fittings, etc.) is allowed only by trained qualified personnel who are familiar with this manual.

⚠	**It is forbidden to place volatile and flammable substances (alcohol, solvents, etc.) in the oven that can cause a fire or explosion !!!**
⚠	**The oven may only be operated by authorized persons who are familiar with all the rules of safe work!**
⚠	**When loading and unloading trays, protective gloves made of non-flammable materials must be worn!**
⚠	**Unauthorized presence of persons not authorized to operate the oven in the immediate vicinity of it is strictly prohibited!**

1.5. Specifications

Type of equipment	Rotary oven with proofing cabinet or stand		Proofing cabinet	Stand	Rotary oven with roll-out trolley	
Модель	KDP1064B	GKDP1064B	KDP1064B		KDP1064I	
Energy carrier	Electro	Gas	Electro	-	Electro o	
Number of trays 400x600 mm, (pcs)	10	10	10	10	15	
Distance between trays (mm)	83	83	80	80	80	
Useful area (m3)	2,4	2,4	-	-	3,6	
Oven dimensions						
Width (mm)	990	990	990	990	1100	
Depth (with visor), (mm)	1260	1260	1010	1010	1260	
Height, (mm)	1430	1430	640	640	1914	
Installation and connection data						
Voltage, (V)	3NPE-380	3NPE-380	3NPE-220/380	-	3NPE-380	
Electric power, (kW)	23	1,5	2,4	-	33	
Recommended power cable (type, number of cores, conductor cross-section)	КГНГ 5x10	КГНГ 5x2.5	КГНГ 5x2.5	-	КГНГ 5x10	
Recommended circuit breaker (type, maximum load current / number of poles)	C50A / 3	C 10A /3	B 10A /3	B 10A /3		
Gas consumption, (m3 / hour)	-	2,2	-	-	-	
Recommended type of flexible bellows gas supply	-	¾ screw	-	-	-	
Thermal power, (Kcal / hour)	28000	28000			43300	
Maximum temperature inside the chamber (C0)	300	300	70	-	300	
Recommended venting of the steam and heat / waste gases emitted by the equipment. Run with a pipe with a diameter of at least (mm)	90	90/150	-	-	90	
Recommended height of the exhaust pipe (M)	-	8	-	-	-	
Equipment weight, (kg)	240	290	80	60	570	

1.6. Dimensions:

The dimensions of the ovens are shown in "Figure 1.1-1.4" and are reflected in the table in section 1.5. The manufacturer has the right to make changes in the design of the equipment and change the dimensions**.**

1.7. General characteristics of the materials used in the product

The 10 series oven has a block design. Main blocks (Fig. 1.1 and 1.2), oven block, proofing cabinet or stand block.

The inner walls of the baking chamber and the front panels of the oven body are made of AISI 304 stainless steel sheet. The space between the inner and outer panels is filled with mineral wool insulation, layer

thickness from 40 to 120 mm.

The heat fan has one rotation speed.

On the roof of the oven body (Fig. 1.1 - 1.4), a thermal fan, a drive for rotation of a rack trolley, a water pipe of a steam generator, and exhaust ventilation pipes (steam removal) are mounted. The space between these units is insulated with industrial mineral wool slabs. On top, the insulation is covered with a galvanized carbon steel sheet that forms the roof of the oven. A door is hung on the right block of the oven body.

The control panel is located on the left front panel of the oven. To cool the control panel, an axial fan can be optionally integrated in the upper left of the oven.

The visor is used to collect steam and smoke when opening the door, followed by their removal by an exhaust fan. The mounting block of the oven electrical equipment is located behind the control panel.

The baking chamber is heated by air circulating in a closed circuit. In the rear right part of the baking chamber, a slide block is installed, which has the purpose: to evenly distribute heated air along the height of the chamber and direct it to the dough pieces. The regulation of the flow rate is carried out by changing the size of the slots between the fixed panels and the movable dampers. Fig. 3.2From the baking chamber, air is sucked into the heating block, below the decorative panel. Further, heated in a heat exchanger (heating element block) passes through the impeller of the heat fan and is directed to the elements of the steam generator, heating them. From the steam generator, the air flow through the vane block goes back to the baking chamber.

The thermal block (heat exchanger) of a gas oven consists of a burner device (gas burner), a heat exchanger, and a chimney. Heat exchanger 2 Fig. 1.2 and 1.4 gas oven, made of stainless steel AISI 304. As a burner device in gas-fired ovens, a single-stage gas fan burner manufactured by "RIELLO." models RX 28 S / PV for 10 series and RX 35 S / PV for 15 series of ovens. The thermal block of electric ovens is made in the form of a heating element block.

To control the temperature of the heated air and control the baking process, a temperature sensor is built into the air duct. The sensor is located behind the control panel under the thermal block.

Process steam for moistening dough pieces is generated by steam generator 3 Fig. 1.1-1.4, located in the right corner of the back wall of the baking chamber, behind the slide block. The supplying water supply is connected to the external network through a ball valve. The amount of water supplied for steam generation is set according to the program (option) or manually and is determined by the opening time of the solenoid valve. Water is supplied to the cast-iron balls of two tiers of the steam generator at the same time and flows through the holes in the bottom of the trays to the balls of the trays of the lower levels. This configuration of the steam generator provides its high productivity in terms of steam generation.

Part of the water that has not evaporated in the steam generator is collected in the bath and is removed through a drain pipe to the sewer. Steam enters the baking chamber through the slots in the slide block. The steam generator functions normally only at a pressure of 0.2-0.5 MPa.

The amount of water supplied for vaporization is selected empirically and averages about 5 seconds. The steam supply time depends on the temperature in the baking chamber and the pressure of the heating water. The higher the temperature and pressure of the water, the less time it takes to supply it to the steam generator. The steam supply on the oven with the touch control panel is programmed before starting the program.

The rotary rack drive consists of a worm gear motor and an emergency clutch. The output shaft of the gearbox is connected to the frame of the rotary rack. The shaft passes through bushings made of high temperature graphite polyamide.

To protect the gear motor gearbox from overloads, a torque limiter (emergency clutch) is built into the gearbox. Torque adjustment is carried out with a nut mounted on the top of the output shaft. Swivel rack, should rotate when pressing on the frame with a force of 10 - 15 kg / cm. This adjustment is made with the oven turned off.

The drive should be adjusted in such a way that the rotary rack, loaded with dough pieces, is guaranteed to rotate, while the clutch should engage in the event of overloads and stalling. The steam extraction system consists of two exhaust pipes installed above the holes in the ceiling of the right front part of the baking chamber. Inside the baking chamber there is one hole (in the right front corner) forming an

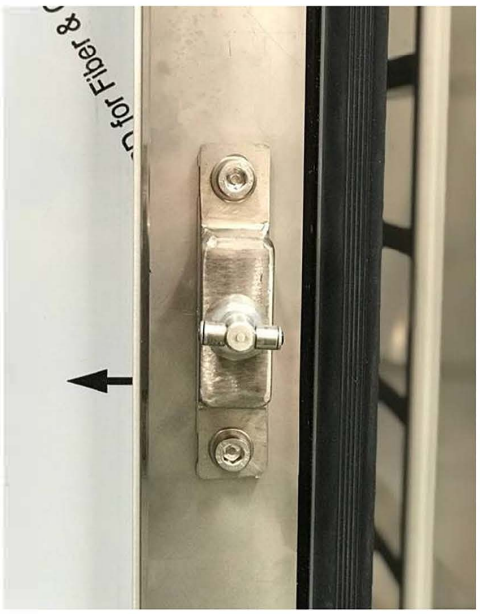
exhaust duct from the bottom of the oven. This channel serves to discharge excess steam and pressure in the process of vaporization when steam is supplied and the vapor of the batch is released when baking products. Above the second hole there is a pipe with a damper driven by an electromagnet. The damper is closed during baking and opens by pressing a button, and when installing the touch panel, according to the program at the end of baking, to remove baking vapors and smoke from the baking chamber that accumulate in the upper part of the baking chamber. Also, the damper should be opened in the oven cooling mode to ensure intensive air exchange and accelerate the cooling process of the baking chamber, manually or according to a set program. To collect and remove smoke and steam coming out of the oven when the door is opened, the oven canopy with an axial fan installed on it is used 7 Fig. 1.1-1.4. The base of the door is a body filled with mineral wool insulation. Heat-resistant glass is hermetically installed on the inner side of the door. On the outside of the door body there are hinges and a locking mechanism. The lights, covered by the front panels, are installed along the entire height of the baking chamber on the right. Access to them is provided through the protective glass from the side of the baking chamber and outside the oven through decorative covers to the fixture of the lamp. 120^0

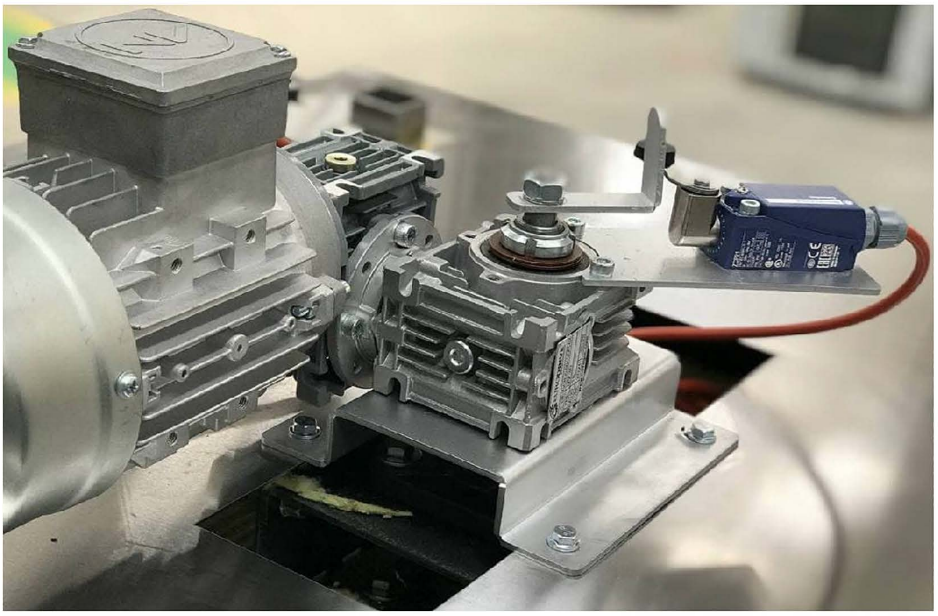
The door locking mechanism is operated by an external handle. The door has an opening limiter, which protects it from opening by more than 120.

The door is hung on the jamb of the right block.

The frying chamber door is sealed with a high-temperature silicone profile attached to the chamber body. To adjust the tight fit of the profile to the plane of the door, expansion joints are used, installed under the hinges and the locking mechanism.

A door opening sensor is installed on the bottom lock. When the door is opened, the thermal fan, the rack rotation mechanism and the exhaust fan are switched on automatically.





2. TRANSPORTATION

The equipment is delivered to the customer fixed on a pallet, covered with a stretch film or in a crate. Crate packaging is negotiated separately. To move in the factory container, use the methods of movement indicated in "Figure 2".
For minor movements of the oven within the premises of its installation site, you can use the wheels, disabling their mechanical fixation.
The manufacturer is not responsible for any problems that may arise during transportation.

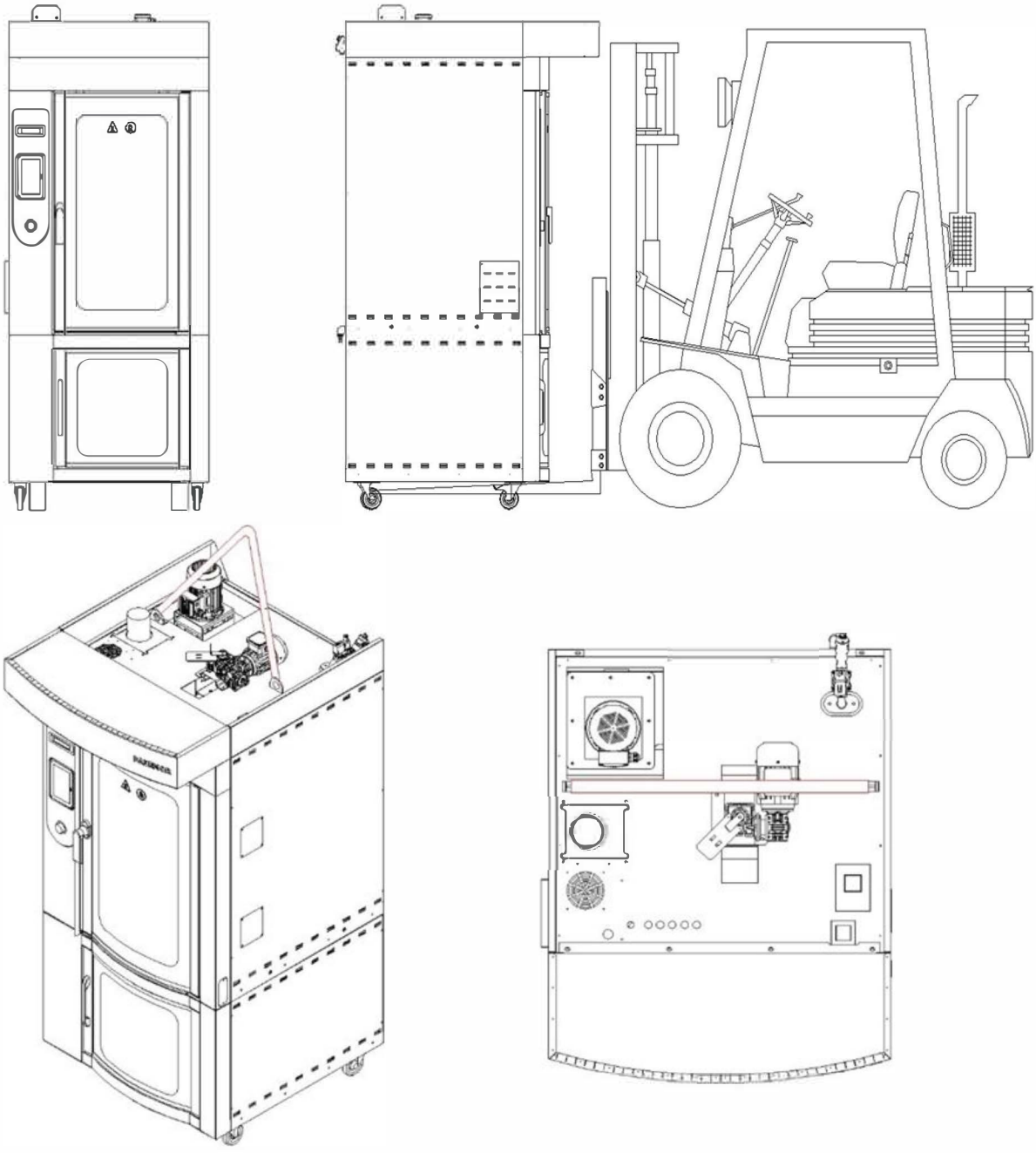


Figure 2. Ways to move equipment.

3. OVEN INSTALLATION

3.1. Security measures

⚠	**Before switching the oven, check the following:** **○ That all safety features are in place;** **○ That no part of the oven is damaged;**
⚠	**That all foreign objects not related to it are removed from the oven and its immediate vicinity.** **Otherwise, before turning on the oven, it is necessary to eliminate all malfunctions and errors.** **After the end of the operation of the oven, it must always be turned off using the main switch and shut off the water and fuel supply using the shut-off valves.**
⚠	**All commissioning, maintenance and repair work may only be carried out by specialists authorized by the manufacturer, who are familiar with the technical characteristics of the equipment and the rules for safe operation.**
⚠	**Before any work on the oven (maintenance, repair), it must be disconnected from the power supply.**
⚠	**After completion of all work on maintenance or repair of the equipment, during the further operation of the oven, it is necessary to take into account everything indicated in this operating manual. Make sure that all parts of the oven and safety elements are correctly installed and in place.**
⚠	**The oven must not be turned on until all safety regulations have been met!**
⚠	**Do not leave children unattended while the appliance is in operation to exclude the possibility of playing with the appliance!**
⚠	**Persons who have studied this passport, the safety instructions for working on this equipment, as well as those who have been instructed, are allowed to work with the oven.**
⚠	**- Do not bring flammable or other dangerous substances into the oven.** **- Do not use the oven for drying various non-food products.** **- Do not make changes to the device of the oven without the consent of the manufacturer.** **- Do not exceed the weight, load and dimensions recommended in the passport.** **- Do not obstruct free access to ventilation openings.** **- Turn off equipment for maintenance and sanitization.**
⚠	**To avoid creating a threat to the life of personnel in the event of emergency situation, if a leak of gaseous or liquid fuel is detected, the smell of gas appears:** **1. Avoid fire and sparks. (switching on/off lights and electrical appliances).** **2. Close the shut-off valve for the fuel supply.** **3. Turn on the ventilation system to ventilate the premises where the oven is installed.** **4. Turn off the oven by pressing the on / off button, disconnect the oven from the mains with the input switch.** **5. Call a specialist who is authorized and qualified to carry out repair work.6. Устранить причину неисправности, при необходимости охладить печь.**
⚠	

3.2. Oven installation

3.2.1 Requirements for premises and communications

The premises in which the oven is installed must be equipped with forced supply and exhaust ventilation and comply with established standards. Calculation of air exchange in the premises is carried out with the help of specialized organizations. The connection of the oven to the workshop ventilation system is carried out by the operating organization.

Inter-shop floors must withstand the load created by the weight of the oven.

The floor at the installation site must be flat, made of non-combustible material.

When choosing a place for installing the oven (Figure 3.1), the following requirements should be followed:

- the distance from the gas burner and power circuits of electrical equipment to the building envelope must be at least 0.8 m;
- The distance from the rear wall to other equipment must be at least 0.2 m;
- the distance from the right side wall of the oven to the enclosing structures of buildings or to other equipment is not regulated. It is allowed to install the oven side, right wall close to the building envelope or other equipment.

The workshop room for connecting the oven must be additionally equipped with:

- water supply system, pressure in the system in the range: 0.2 - 0.5 MPa;
- have a power supply with a voltage of 380 V, 50 Hz, designed for the load created by the installed equipment;
- have a natural gas supply with a pressure of 2 to 5 kPa;
- to connect the burner to a common gas pipeline, a locking device and a pressure gauge must be installed in front of it;
- a chimney with an internal diameter of at least 100 mm and meeting the requirements of the standards for chimneys, for the removal of flue gases generated during the operation of the oven burner. The height of the chimney must be at least 4 m from the level of the burner, while the top of the pipe must protrude above the highest point of the ridge of a pitched roof by at least 0.5 m, and a flat, insulated roof by at least 1.5 m.

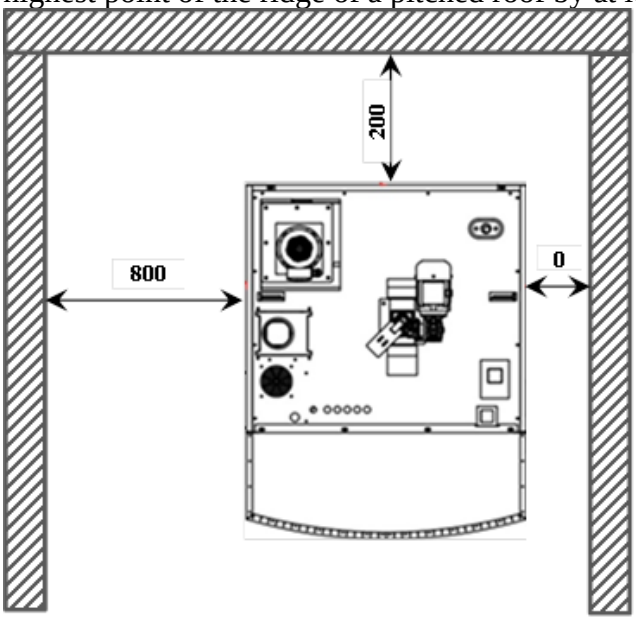


Figure 3.1 Minimum oven distances.

3.2.2. Installation, installation and connection of the oven

⚠	**When putting the oven into operation, the first start-up must be carried out after checking electrical connections, the presence of draft in the chimney and the tightness of fuel and gas pipelines.**
⚠	**In order to avoid hot air burns when opening the oven door, it is necessary to open the door of the frying chamber in two stages, slightly open the door by 5-10 cm and wait for 20-30 seconds until the heat fan and trolley stop completely, open the door completely. In this case, the employee must be outside the door.**
⚠	**In order to avoid burns from hot air when installing and removing baking sheets from the rack, as well as to protect against burns from accidentally touching heated surfaces when manipulating the door, it is necessary to use protective heat-resistant gloves. At the same time, the employee must be dressed in a suit made of cotton fabric**

- Installation, dismantling, protective earthing, maintenance of drives and electrical equipment must comply with the requirements and established standards.
- Unpacking, installation and testing of the oven must be carried out by specialists with the necessary qualifications.
- After checking the condition of the packaging, unpack the oven, carry out an external inspection and check the completeness.

- Install the oven in a pre-prepared place that meets the requirements of this manual.
- Connect the customer's exhaust ventilation system to the oven, which must be designed and installed by certified specialists:
- bring the exhaust air duct to the exhaust pipes of the steam removal system, mounting it with a gap. At the same time, it is necessary to ensure a constant thrust value (vacuum) of at least 0÷5 Pa, measured at the upper ends of the exhaust pipes relative to the environment;
- к осевому вентилятору козырька печи, непосредственно присоединить отдельный вытяжной воздуховод диаметром не менее 90 мм, или присоединить к цеховой, вытяжной вентиляции. При этом труба воздуховода, должна быть выведена выше самой высокой части здания.

In the case of connecting the oven exhaust duct to the workshop ventilation system, as well as when connecting several ducts into a single duct, the latter must be equipped with its own exhaust fan, whose performance is obviously greater than the total capacity of the connected equipment.
When the above conditions are met, it is allowed to connect the steam removal ducts and the canopy into one combined air duct. In this case, the junction
It is recommended to install air ducts at an acute angle, as far as possible from the axial fan of the oven and, when it is turned on, there should not be excess pressure in the steam removal duct, leading to the appearance of a reverse air flow.
The design of exhaust ventilation must be equipped with condensate traps,
in order to exclude the ingress of condensate from the air ducts onto the oven or into the oven hood.

⚠	**The electrical cable connecting the hood and the oven must not touch the aluminum pipe to remove steam from the hood to the chimney of the oven.**
⚠	**During electrical work, all safety rules must be taken into account. The oven may only be connected by a qualified person!**

	**If the cable is damaged, it must be replaced by a qualified person to avoid danger!**

- Connect a protective copper conductor with a cross section of at least 10 mm2 to the earthing terminal of the oven, connected to the earthing loop of the bakery.
- In the immediate vicinity of the oven, in an easily accessible place on the wall, a switching device (disconnector, automatic switch) of a closed type must be installed, corresponding to the power consumption. The device is installed to be able to turn off the oven in emergency situations, to carry out maintenance and repair;

Connection to the switching device is made with a cable of the KGNT-5 type in rubber insulation, with a cross section corresponding to the load (type of equipment). The cable is included in the factory kit of the oven. The cable must be protected from external influences with a plastic tube or box.

	**During electrical work, it is necessary to take into account all technical safety rules. The oven may only be connected by a qualified person!**
	**If the cable is damaged, it must be replaced by a qualified person to avoid danger!**

- After carrying out all installation work, it is necessary to check the correctness of the electrical installation.
- Before turning on the oven for the first time, tighten the screws and nuts of the clamps of the electrical contacts of wires, starters, relays, switches, electric motors, and other electrical elements.

Connect the flue system to the 90 mm outlet. The flue pipe must be made of a heat-resistant material that can withstand temperatures of at least 450 ° C, the wall thickness is at least 1 mm and must be installed so that the condensate formed during the operation of the burner does not enter the combustion chamber and onto the roof of the oven.

	**Do not connect the exhaust ventilation system to the chimney!**

The water inlet is located on the rear right side of the oven (Figure 1.1-1.4). The connection is made with a flexible hose (locally procured) to a pipe or tap with a 1/2" male thread. The connection must be made in such a way that the hose cannot be disconnected in the event of an increase in water pressure.

If the water pressure in the water supply pipe exceeds 0.5 MPa, then a reducer must be installed in front of the inlet hose on the oven to reduce it. At pressures below 0.2 MPa, it is recommended to install pressure boosting equipment.

	**INLET WATER TEMPERATURE SHOULD NOT EXCEED 30°C!**

Before introducing water to the oven, it is necessary to install a mechanical filter of large particles with a mesh of a replaceable filter element of not more than 5 microns, and to prevent the formation of limescale, it is recommended to install a water softener.

Drainage of condensate from the oven Fig. 1.1-1.4. “Water drain 1/2”, performed using a rubber hose with an internal section of 15 mm, into a prepared drain or a simple container (a drain hose is not included in the delivery set and is purchased at the installation site).

Connect the burner to the fuel line. Connection diagrams are specified in the "Installation, use and maintenance instructions" of the burner.

The preliminary proofing cabinet is connected to the mains voltage of 220V in the cabinet of the power oven.

The water supply is carried out from the shut-off valves or pipes of the water treatment system for the oven.

Condensate is drained from the chamber of the pre-proofer by connecting a corrugated drain of the required length. (not included in the scope of delivery) purchased locally.

3.2.3. Preparation for work

⚠	**It is strictly forbidden to work without protective grounding.**
⚠	**It is not allowed to operate the oven in the presence of reverse draft (opposite to the direction of natural exhaust ventilation).**

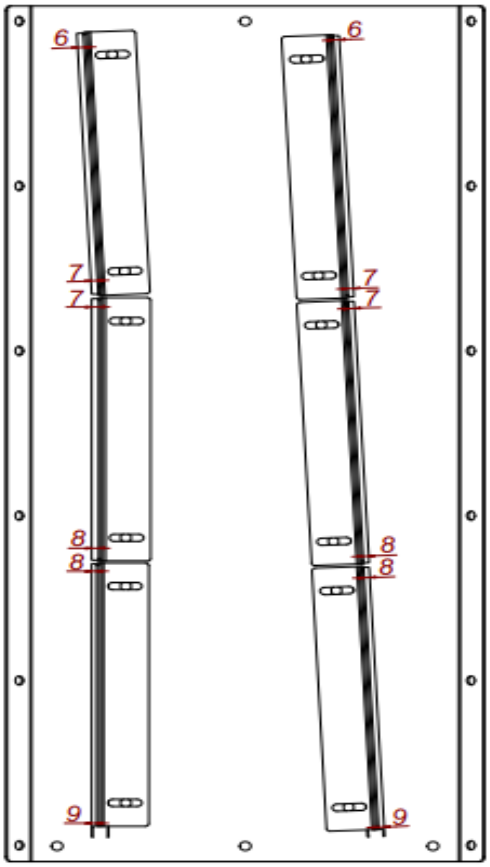
- Carry out work related to checking the fuel system.
- Carry out work related to checking the power circuits.
- With the tap on the purge plug open, open the tap on the lowering and after 1-2 minutes. close the tap on the blow-out candle. Carry out a control pressure test, close the valve for
lowering and check that there is no visible drop in gas pressure on the gauge. Open the faucet at the bottom.
- Carry out phasing of electric motors of rotary rack drive, heat fan, exhaust fan.
- Check the frying chamber of the oven: there must be no foreign objects inside that prevent the rotation of the rotary rack.
- Check the position of the main switch. It must be in the "on" position.
- Check the operation of the interlock door switch by switching on the oven and opening the door. At the same time, the drive for turning the rack (in the loading position), the heat fan of the oven should stop and the burner (heaters) should turn off.
- Adjust the stop position of the drive for turning the rack; to do this, open the door with the oven turned on. In automatic mode, the drive of the rack will stop according to the position sensor, if the stop position does not coincide with loading - unloading, then manually tighten the frame of the rotary rack to its original position with force and check again by closing and opening the door.

⚠	**The appearance of a small amount of smoke during firing (from firing preservative lubricants) is not a malfunction.**

- Check that the damper installed on the chimney is closed securely. Carry out a uniformity check of the control flow of the steam generator with water, with the decorative grate covering the steam generator removed.
- Check and stretch the elements of the pre-proofer and the contacts of the electrical connections.
- Check the operation of the timer and the sound signal of the end of the countdown.
- Check the temperature control inside the chamber. It is recommended to use a psychometric hygrometer or other device for measuring humidity and temperature, for monitoring temperature and humidity.
- Thermostat 5 Fig. 5.1 set the optimum water temperature to maintain the required humidity.
- Set the thermostat to 40°C.
- Check the operation of the cabinet within 60 minutes. If necessary, adjust the thermostat settings.
- After completing the assembly of the oven and connecting it to the exhaust ventilation, electricity, water supply and sewerage, fire the oven for at least 3 hours. At a temperature of 150°C in the first hour of operation, then for each hour we add 50°C, but not higher than 250°C.
- Fire and then tint trays and molds (except for stainless steel trolleys). Forms and baking sheets preheated at a temperature not lower than 150 ° C, on hot, grease with vegetable oil and heat at a temperature of 250 ° C for 40 minutes, until an elastic oil film forms, which is formed when the oil burns out. If the oil film has formed unevenly, which occurs during the firing of bread forms, then it is necessary to perform the lubrication and firing operations again.
- Carry out test baking, fully loading the rack in height with dough pieces. When carrying out the first baking, after starting the oven, wait for it to reach the set temperature, and to ensure that the steam generator warms

up, keep the oven without loading for at least 20-30 minutes.
- If the color of the crust of baked products is not the same at different levels of the rack trolley, then it is necessary to adjust the width of the sliding slots for supplying hot air to the baking chamber Fig. 3.2, keeping in mind that an increase in the width of the slide slots leads to an increase in temperature and vice versa. The initial state of the slide slots is set at the factory. Make adjustments, if necessary, in increments of 1 mm.

A



B

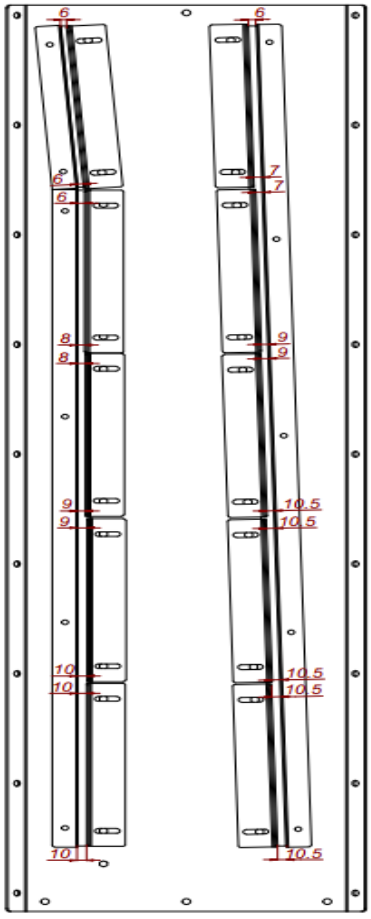


Figure 3.2 Dimensions of gate slots (factory setting) view KDP1064B-KDP1064E-GKDP1064B-GKDP1064E

4. CONTROL PANEL

4.1. Oven mechanical control panel

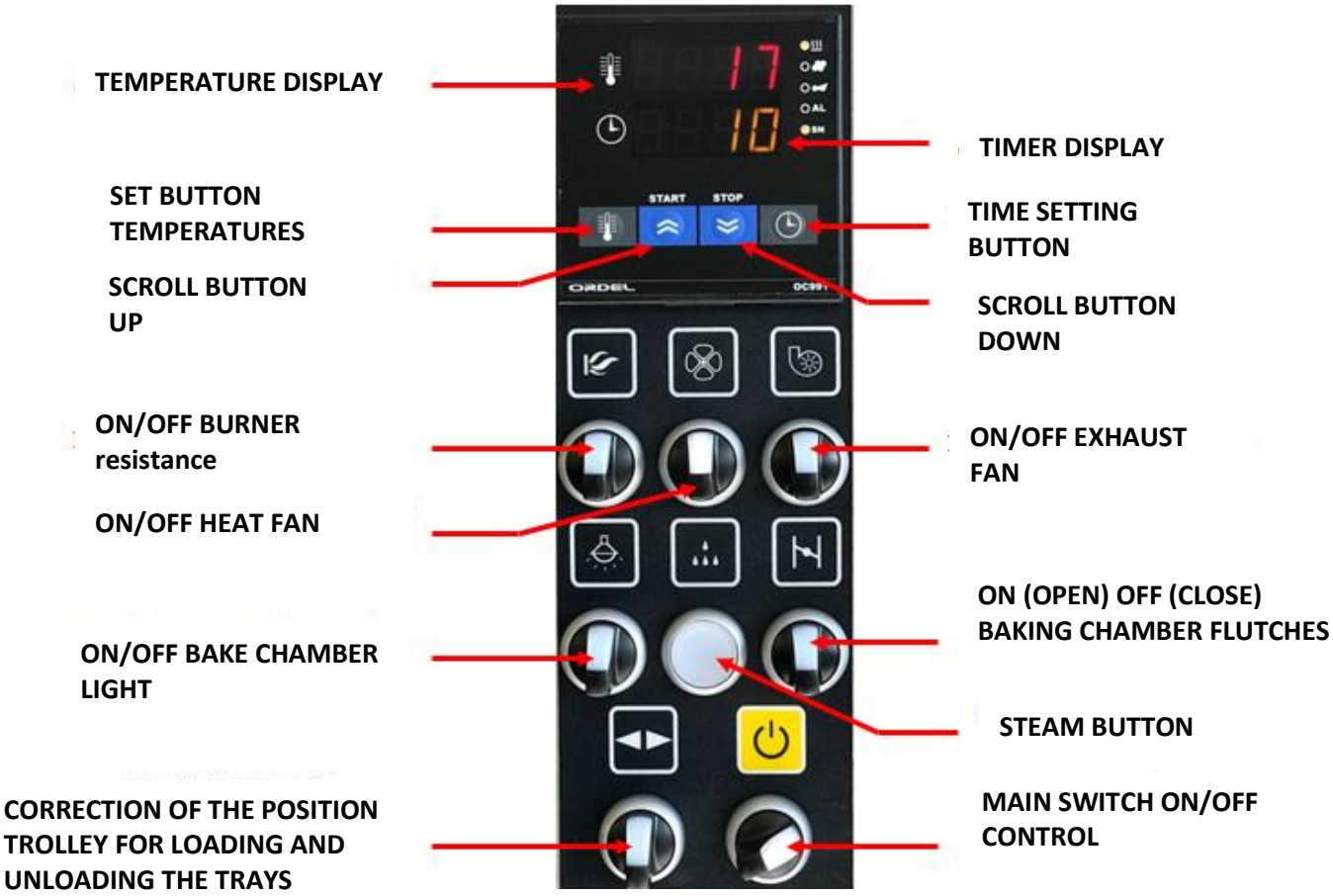


Figure 4.1 Mechanical oven control panel

4.1.1. How to use the remote control

Attention! Before turning on the remote, make sure that all switches are in the **"OFF"** (leftmost position)

1.-Turn the main switch "on/off control panel" to the "on" position, the power indicator will light up.  .
2.- On the temperature controller (by pressing the setting button, enter the setting menu, set the value with the scroll buttons), set the desired temperature and baking time. After setting the required values, we wait for the value to be saved. (the indicator will change from blinking to steady)
3.- Turn the "on / off burner (heater)" switch to the "on" position. The system will check the safety circuits (the door of the baking chamber is closed, the fan heater circuit is working, the emergency sensors are in a normal state, the switches not involved in the process are turned off) and will give a command to turn on the heating (start the burner or turn on the heating element). The burner indicator will light up.  .
4.- The "on / off fan heater" button must be in the "off" position, the operation mode is automatic, when the door is opened, the fan heater stops. When the door is closed, the fan heater starts with a delay of "Silence time" which is set by the timer during commissioning (4 sec. factory setting). When on, it is used when it is necessary to cool the baking chamber (if the next baking takes place at lower temperatures or after finishing work on the oven) and does not turn off when the door is open. When it is turned on and the necessary

conditions are met (the door is open), the heat fan will turn on and the indicator will light up. When the temperature in the baking chamber reaches 500C, the fan will turn off automatically. To resume its operation, close the door.

5.-After the end of the timer (end of baking time), an audible signal will sound, but the baking process will not stop. It is necessary to turn off the sound signal by briefly pressing button 12 of the controller control panel (Figure 5.1) Before opening the baking chamber door, the extractor fan must be turned on. Turn the “exhaust fan on / off” switch to the “on” position, the fan will turn on and the indicator will light up.

6.- After stopping the baking program, turning off the burner (heater) switch o the “off” position, and turning on the exhaust fan, you can slightly open the door to let steam and heated air into the oven hood. After adjusting the position of the rack with the three-position switch “adjusting the position of the pin for loading and unloading trays”. When the rotation drive is turned on, the indicator will be lit.

7.- If necessary, you can turn on the lighting of the baking chamber with the switch "on / off the lighting of the baking chamber" When turned on, the indicator lights up.

8.- If necessary, press the button for forced steam supply, when the steam generator is ready and briefly pressed (no more than 10 seconds), the indicator will light up on the button.

9.- If necessary (intensive moistening of the baking chamber of the moisture coming out of the product) to remove excess moisture (drying), turn on the switch "on / off the damper of the baking chamber", when it is opened, the indicator will light up.

Attention!
A minimum of 20 minutes must be allowed between forced steam injections!

4.1.2. Controller control panel

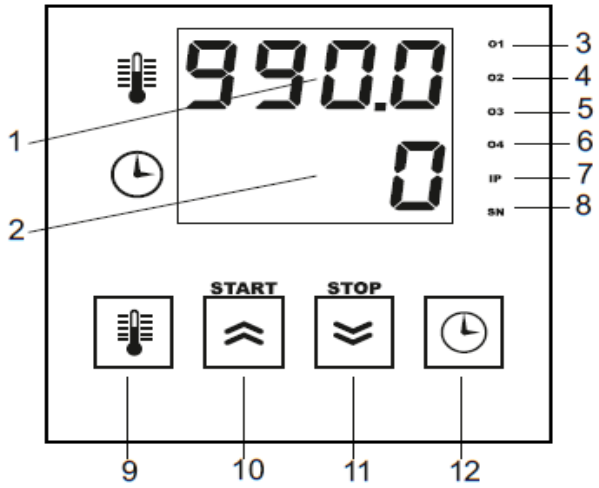


Figure 4.2. Controller control panel

№	Element name	Purpose of the element
1	Temperature display	Displays set temperature and error (alarm) codes
2	Time display	Displays the set operating time of the equipment and the countdown.
3	01 LED	Displays the status of the first output (DO 1)
4	02 LED	Displays the status of the second output (DO 2

5	03 LED	Not on this model
6	04 LED	Not on this model
7	IP LED	Indicates the status of the alarm contact (DI)
8	SN светодиод	Отображает счет времени в секундах.
9	Temperature setting button	Used to enter temperature setting mode.
10	up button	Used to start the synchronization operation (Start) and increase the setting value
11	Down button	Used to stop the synchronization operation (Stop) and decrease the setting value
12	Time setting button	Used to enter the time setting mode and turn off the sound signal.

To select the required settings, press briefly (no more than 0.5 seconds) on the temperature setting button 9 or time 12.

A short press of the buttons increase, decrease the selected parameter leads to its change by one unit. If a long press is more than 0.5 seconds, then the indicator readings begin to change continuously to the required value.

To set the automatic steam supply: Press the temperature setting button 9 briefly at short intervals twice (the number of the set steam supply will appear on the screen after closing the door in seconds). Press the up or down scroll button to set the time for automatic steam delivery after the door is closed, set the required value (no more than 10 seconds), wait for the set parameter to be automatically saved (do not press anything while saving the set parameter).

4.2. Digital oven control

All actions with a digital control panel are reflected in the instructions from the manufacturer, in the appendix to this manual.

Figure 4.3. Digital oven control

4.3. Mechanical control panel of the pre-proofer

Element name	Purpose of the element
timer	Setting the proofing time for dough pieces. (works independently of the heating and steam control scheme)
Turn off the signal	Turn off the signal for the end of the timer countdown.
thermostat	Setting the desired temperature inside the proofing chamber.
Steam generator on/off	Switching on the evaporator and humidification circuit inside the proofing chamber
Remote on/off	Apply or remove voltage from the control panel circuit.

Figure 4.4. Proving cabinet climate control panel

The order of work with the proofer: Turn on the control panel with the switch . Set the desired temperature. Place baking sheets with dough pieces in the cabinet. Set the required proofing time. Turn on the steam generator . The steam generator operates in manual mode and does not have a humidity sensor. Humidity is controlled visually by the intensity of vaporization and the appearance of water droplets on the surface of the chamber and the inner surface of the door glass. The start of condensation formation corresponds to 75% humidity in the proofing chamber. Water runoff on the surface - 95%. When the required humidity is reached, turn off the steam generator . At the end of the countdown by the timer, turn off the sound signal with the button . At the end of work, turn off the remote control switch .

5. OPERATION PROCEDURE

5.1. Oven operation

When using the electromechanical control panel Figure 4.1:

- All switches are in the leftmost "Off" position. Turn on the oven by turning the switch to the right, the indicator lamp will light up.
- Set the required baking temperature.
- Turn on the burner switch, the indication of turning on the heating elements (burner or heating element) will light up.
- The oven will automatically start preheating to the set temperature.
- If necessary, switch on the lighting of the frying chamber by turning the switch to the right.- Wait for the oven to heat up to the set temperature.
- Open the door of the baking chamber, load the dough piece into the frying chamber and close the door.
- If it is necessary to moisten the dough piece, immediately apply steam by pressing the steam generator button for the required time.
- Set the end time of baking on the control panel. When the timer expires, a beep will sound. But the oven continues to work until the door is opened.
- Before opening the door, the canopy exhaust fan must be switched on.
- Using the function buttons, it is also possible to manually carry out the following actions during the baking process:
- Add steam using the manual steam button ;
- Turn the extractor fan on and off.

- Baking can be stopped at any time in the cycle by turning off the oven switch or opening the door.

- turn on the exhaust ventilation and cool the oven until the temperature drops below 1000C according to the indicator, or for at least 20 minutes, turn on the heat fan switch to cool the oven. Do not turn off an uncooled oven.

- turn off the power supply to the oven using the power switch.

- close the water supply valve.

- In the event of any malfunction during the operation of the oven, it is necessary to carry out the following operations:

- turn off the oven with the button on the control panel;

- turn off the power supply of the oven using the input switch located in the electrical cabinet;

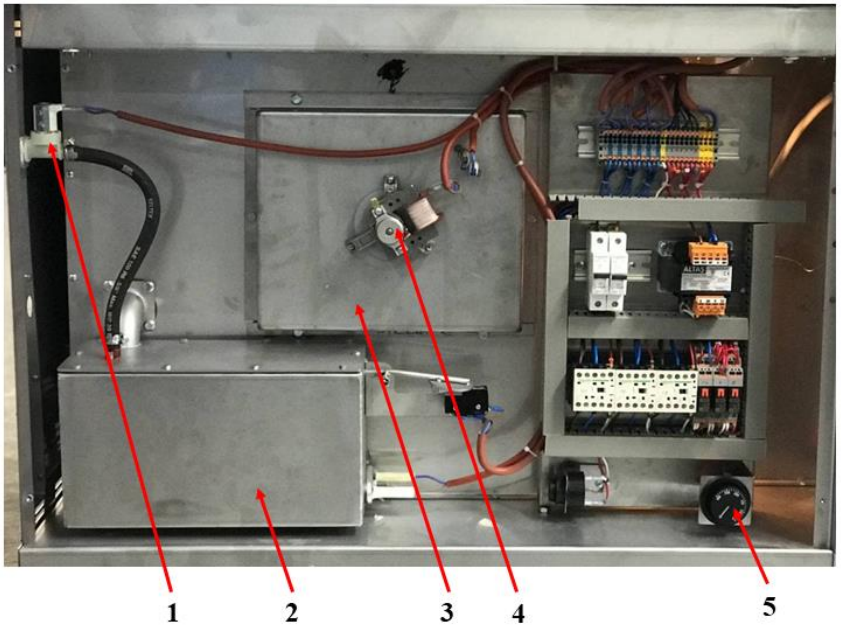
- call specialists for repair and operation.

5.2. Operation of the pre-proofer

The climate control cabinet consists of three main elements:

- air heater 3 Fig. 5.1 (air heater
- steam generator 2 Fig. 5.1 (wet heater)
- control panel Fig. 4.4

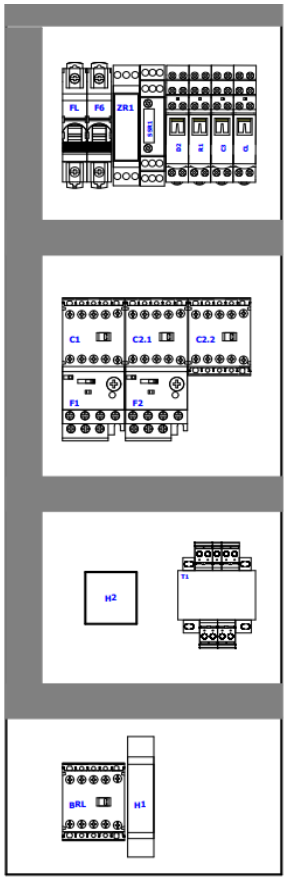
To start the operation, it is necessary to turn on the remote control with the “On / off remote control” switch (the power indicator will light up), select the required temperature inside the cabinet with the “Thermostat” knob, set the required time on the “Timer”, the humidity is set by turning the “On / off steam generator” switch in manual mode until condensation appears on the inner surface of the cabinet door glass. At the end of the timer, an audible signal will sound, turn it off with the "Signal off" button. If the proofing process is completed on this, it is necessary to turn off the control panel with the “On / off control panel” switch, the power indicator will go out.



1. Solenoid valve
2. Steam generator
3. Air heating element
4.Chamber cabinet fan
5. Steam generator water temperature controller

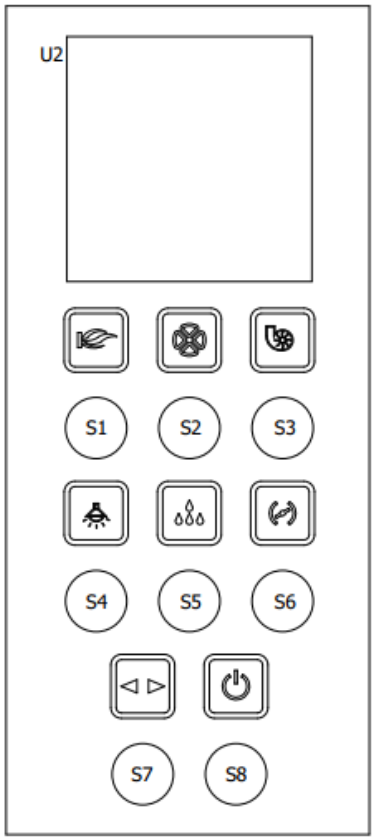
Figure 5.1 Elements of the pre-proofer

6. ELECTRIC SCHEME

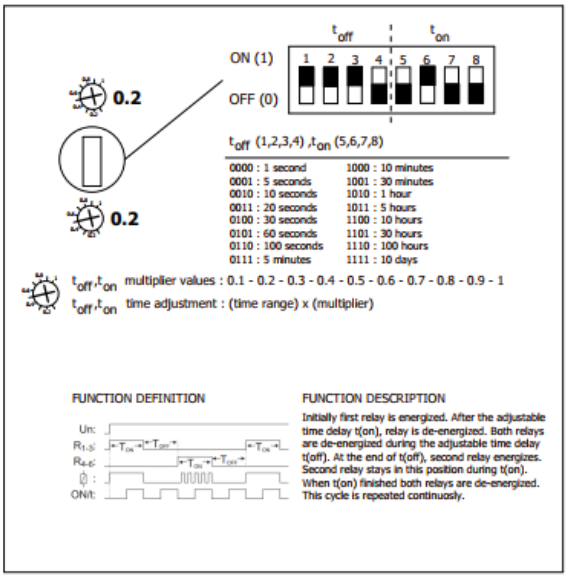


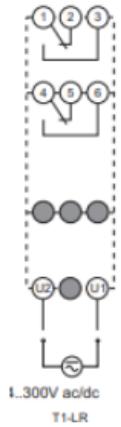
LABEL	TYPE/PROPERTIES
F	MAİN FUSE
FL	F2/L1 CONTROL PHASE FUSE
F6	24V AC TRANSFORMER FUSE
D2	SYSTEM RELAY 1
R1	SYSTEM RELAY 2
C3	ASPIRATOR RELAY
CL	OVEN LAMB RELAY
ZR1	FAN TIME RELAY
SSR1	TURNTABLE LEFT-RIGHT RELAY
C1	FAN CONTACTOR
C2.1	TURNTABLE FORWARD CONTACTOR
C2.2	TURNTABLE BACKWARD CONTACTOR
BRL	BURNER
F1	FAN MOTOR THERMAL
F2	TURNTABLE MOTOR THERMAL
T1	60VA TRANSFORMER 24V AC / 12V AC
H1	BELL
H2	BUZZER

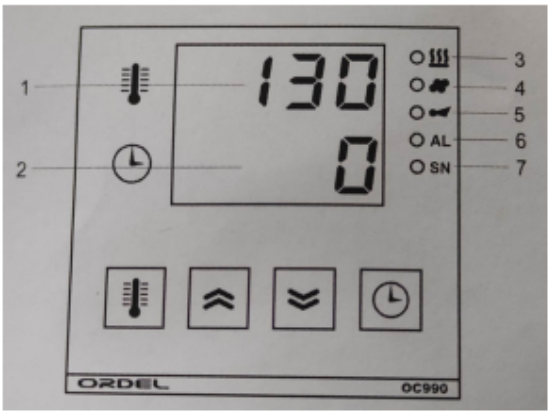
Figure 6.1 Album of diagrams of the KDP1064B oven with a gas burner. Designation of elements of the mounting block.

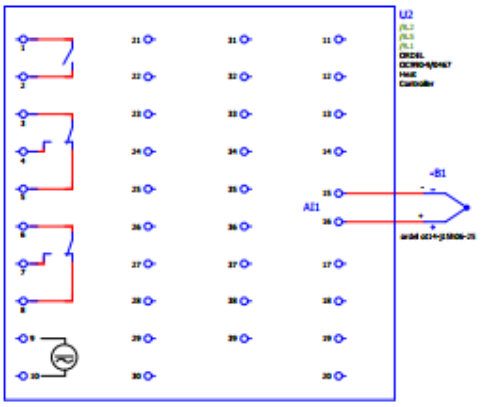


LABEL	TYPE/PROPERTIES
U2	Heat Controller
S1	Burner Button
S2	Fan Button
S3	Aspirator Button
S4	Oven Lamb Button
S5	Steam Button
S6	Flap Button
S7	Turntable Forward-Backward Button
S8	On-Off Button









1	TEMPERATURE INDICATOR	It displays the oven temperature and error messages
2	TIME INDICATOR	While timing operation continues, it displays the remaining time and after the time fininshes, it displays "0".
3	HEATHER LED	lights up when the heater is on
4	STEAM LED	lights up during the steaming process
5	WARNİNG LED	Lights up when the warning output is energized.
6	AL LED	Not available on this model.
7	SN LED	It blinks with a periode of 1 second while the time passes

Figure 6.2 Album of diagrams of the KDP1064B oven with a gas burner. Designation of elements of the control panel and controller.

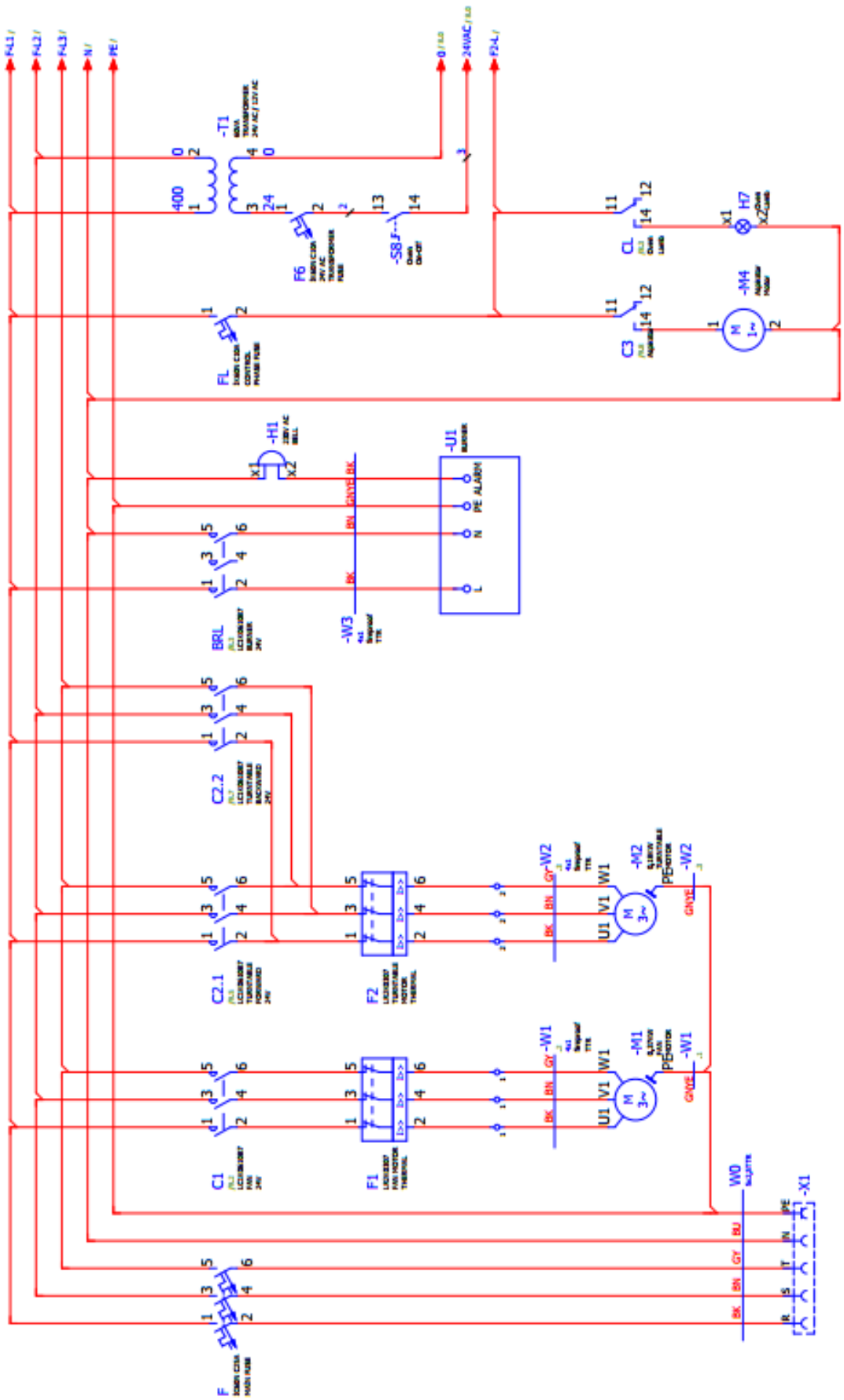


Figure 6.3 Album of diagrams of the KDP1064B oven with a gas burner. Schematic diagram of a power circuit.

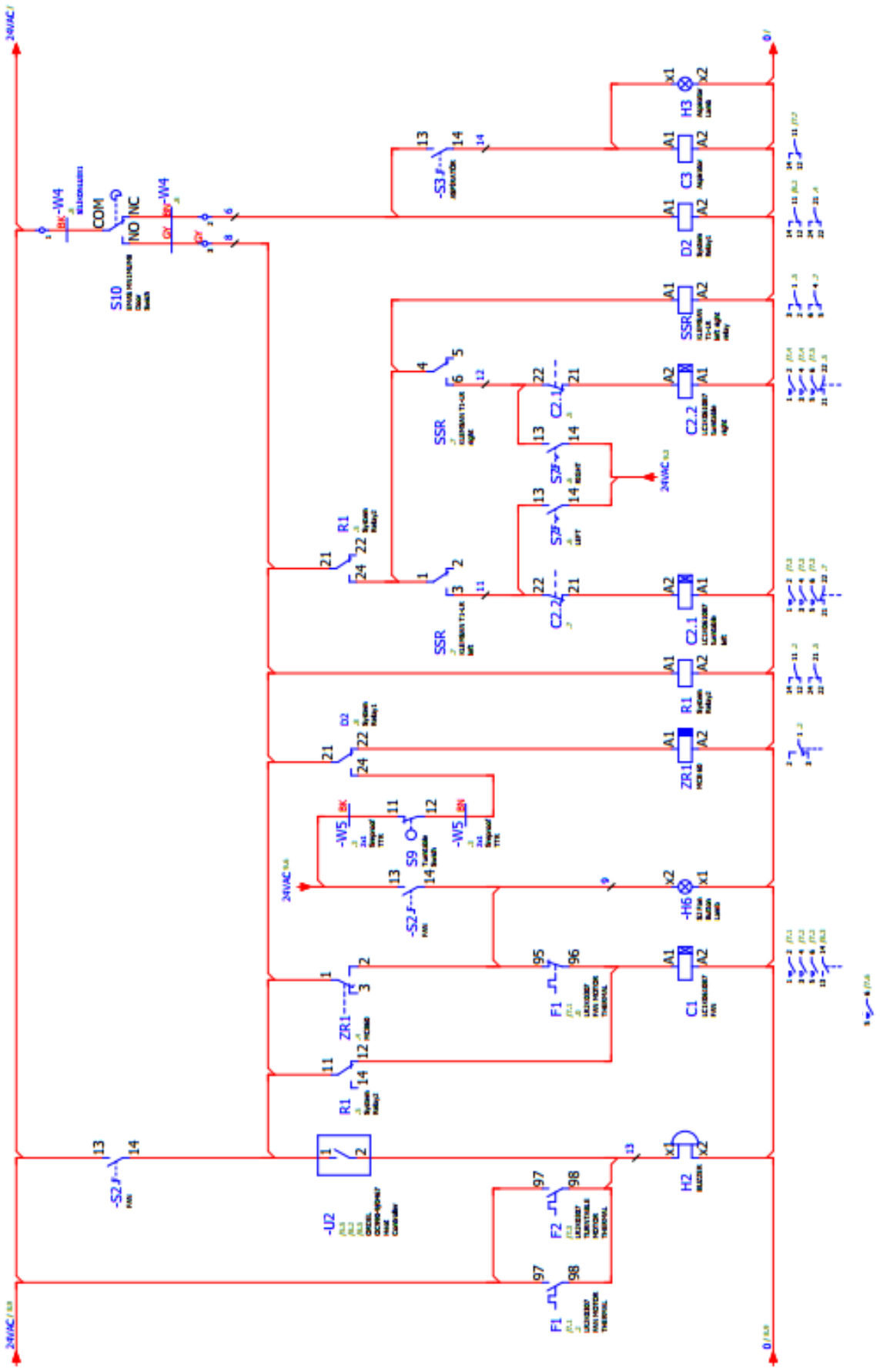
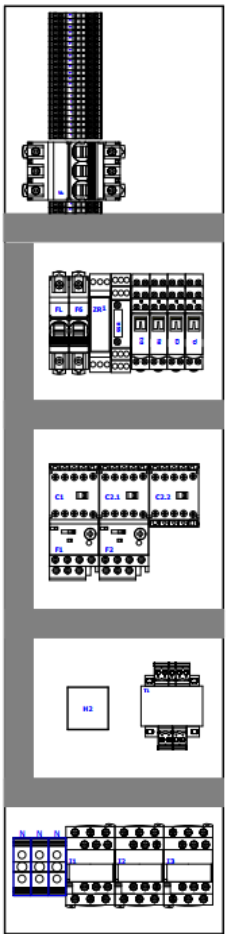


Figure 6.4 Album of diagrams of the KDP1064B oven with a gas burner. Electrical circuit diagram of low-voltage circuits.

Figure 6.5 Album of diagrams of the KDP1064B oven with a gas burner. Electrical circuit diagram of low-voltage circuits.

LABEL	TYPE/PROPERTIES	PRODUCT BRAND	PRODUCK CODE
F	MAİN FUSE	Schneider Electric	İC60N C25A
FL	F2/L1 CONTROL PHASE FUSE	Schneider Electric	İK60N C10A
F6	24V AC TRANSFORMER FUSE	Schneider Electric	İK60N C10A
D2	SYSTEM RELAY 1	Omron	G2RV-SR500 24VAC / DC
R1	SYSTEM RELAY 2	Omron	G2RV-SR500 24VAC / DC
C3	ASPIRATOR RELAY	Omron	G2RV-SR500 24VAC / DC
CL	OVEN LAMB RELAY	Omron	G2RV-SR500 24VAC / DC
ZR1	FAN TIME RELAY	Entes	MCB-60
SSR1	TURNTABLE LEFT-RIGHT RELAY	Klemsan	T1-LR
C1	FAN CONTACTOR	Schneider Electric	LC1K0610B7
C2.1	TURNTABLE FORWARD CONTACTOR	Schneider Electric	LC1K0610B7
C2.2	TURNTABLE BACKWARD CONTACTOR	Schneider Electric	LC1K0610B7
BRL	BURNER	Schneider Electric	LC1K0610B7
F1	FAN MOTOR THERMAL	Schneider Electric	LR2K0307
F2	TURNTABLE MOTOR THERMAL	Schneider Electric	LR2K0307
T1	60VA TRANSFORMER 24V AC / 12V AC	Altaş	
S1	BURNER BUTTON	Eaton	M22-WRLK-W
S2	FAN BUTTON	Eaton	M22-WRLK-W
S3	ASPIRATOR BUTTON	Eaton	M22-WRLK-W
S4	OVEN LAMB BUTTON	Eaton	M22-WRLK-W
S5	STEAM BUTTON	Eaton	M22-WRLK-W
S6	FLAP BUTTON	Eaton	M22-WRLK-W
S7	TURN TABLE BUTTON	Eaton	M-WELK3-W
S8	OVEN ON-OFF BUTTON	Eaton	M22-WRLK-W
S9	TURN TABLE SWITCH	Schneider Electric	XCKP211P16
S10	DOOR SWITCH	Emas	MN1MUM8
U1	BURNER		
U2	HEAT CONTROLLER	ORDEL	OC990-9/0467
LABEL	TYPE/PROPERTIES	PRODUCT BRAND	PRODUCK CODE
M1	FAN MOTOR		0,37 Kw
M2	TURNTABLE MOTOR		0,25 Kw
M3	FLAP MOTOR		
M4	ASPIRATOR MOTOR		0,7 Kw
H1	BELL	Legrand	Bell 230 V~ - 6 VA - 1 module 0 041 07
H2	BUZZER		
H3	ASPIRATOR BUTTON LAMB	Eaton	
H4	BURNER BUTTON LAMB	Eaton	
H5	FLAP BUTTON LAMB	Eaton	
H6	FAN BUTTON LAMB	Eaton	
H7	OVEN LAMB	Eaton	
H8	STEAM BUTTON LAMB	Eaton	
H9	OVEN ON-OFF BUTTON LAMB	Eaton	
H10	OVEN LAMB BUTTON LAMB	Eaton	
W0	INPUT LEAD		5x2,5 TTR Mt.
W1	FAN MOTOR CABLE		4x1 Fireproof cable
W2	TURN TABLE MOTOR CABLE		4x1 Fireproof cable
W3	BURNER CABLE		4x1 Fireproof cable
W4	DOOR SWITCH CABLE		3x1 Fireproof cable
W5	TURN TABLE SWITCH CABLE		2x1 Fireproof cable

Figure 6.6 Album of diagrams of the KDP1064B oven with a gas burner. Designation of electrical circuit elements.



LABEL	TYPE/PROPERTIES
F	MAİN FUSE
FL	F2/L1 CONTROL PHASE FUSE
F6	24V AC TRANSFORMER FUSE
D2	SYSTEM RELAY 1
R1	SYSTEM RELAY 2
C3	ASPIRATOR RELAY
CL	OVEN LAMB RELAY
ZR1	FAN TIME RELAY
SSR1	TURNTABLE LEFT-RIGHT RELAY
C1	FAN CONTACTOR
C2.1	TURNTABLE FORWARD CONTACTOR
C2.2	TURNTABLE BACKWARD CONTACTOR
I1	HEATER CONTACTOR
I2	HEATER CONTACTOR
I3	HEATER CONTACTOR
F1	FAN MOTOR THERMAL
F2	TURNTABLE MOTOR THERMAL
T1	60VA TRANSFORMER 24V AC / 12V AC
H1	BELL
H2	BUZZER

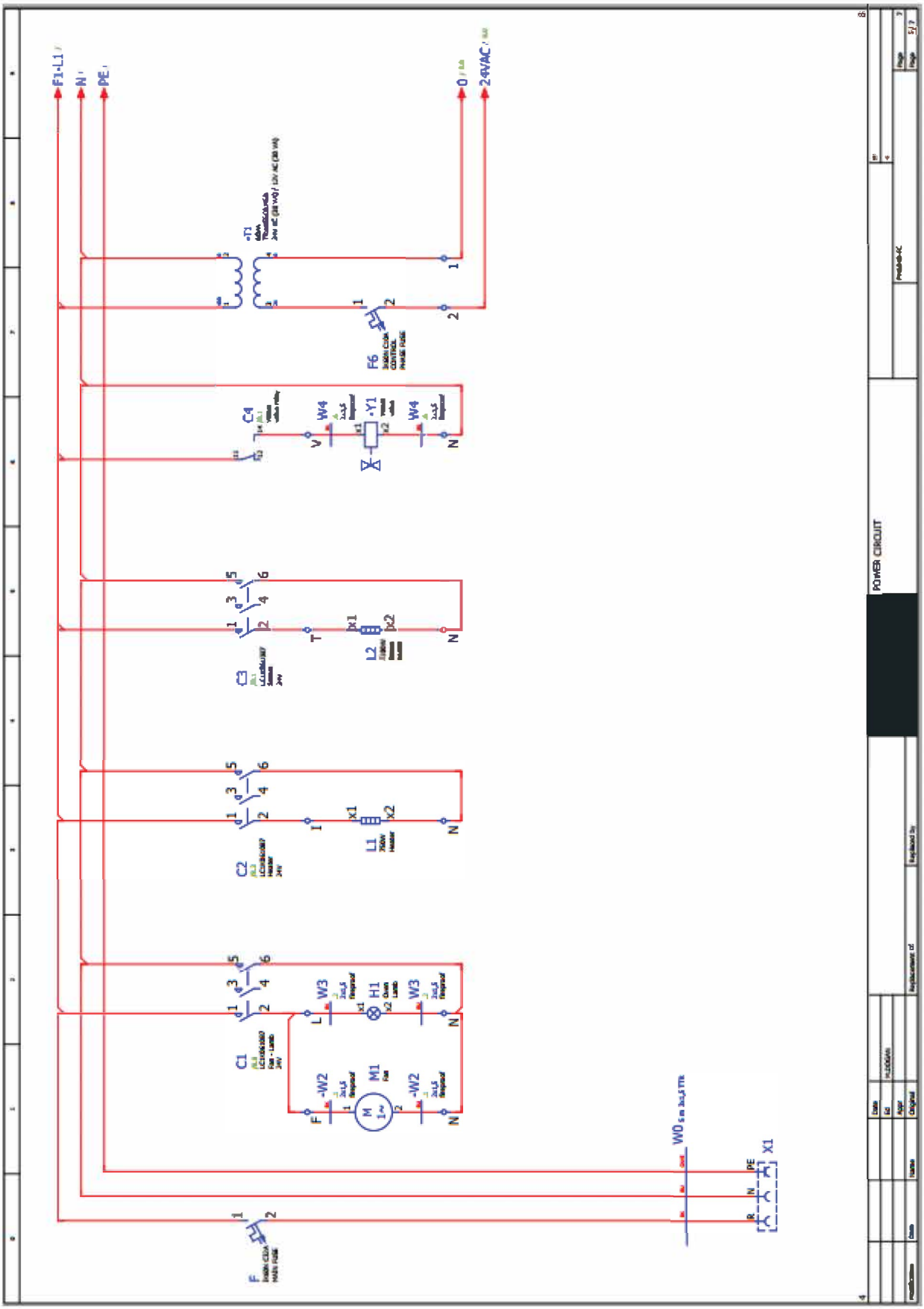


Figure 6.5 Electrical circuit diagram of the power circuit of the pre-proofe

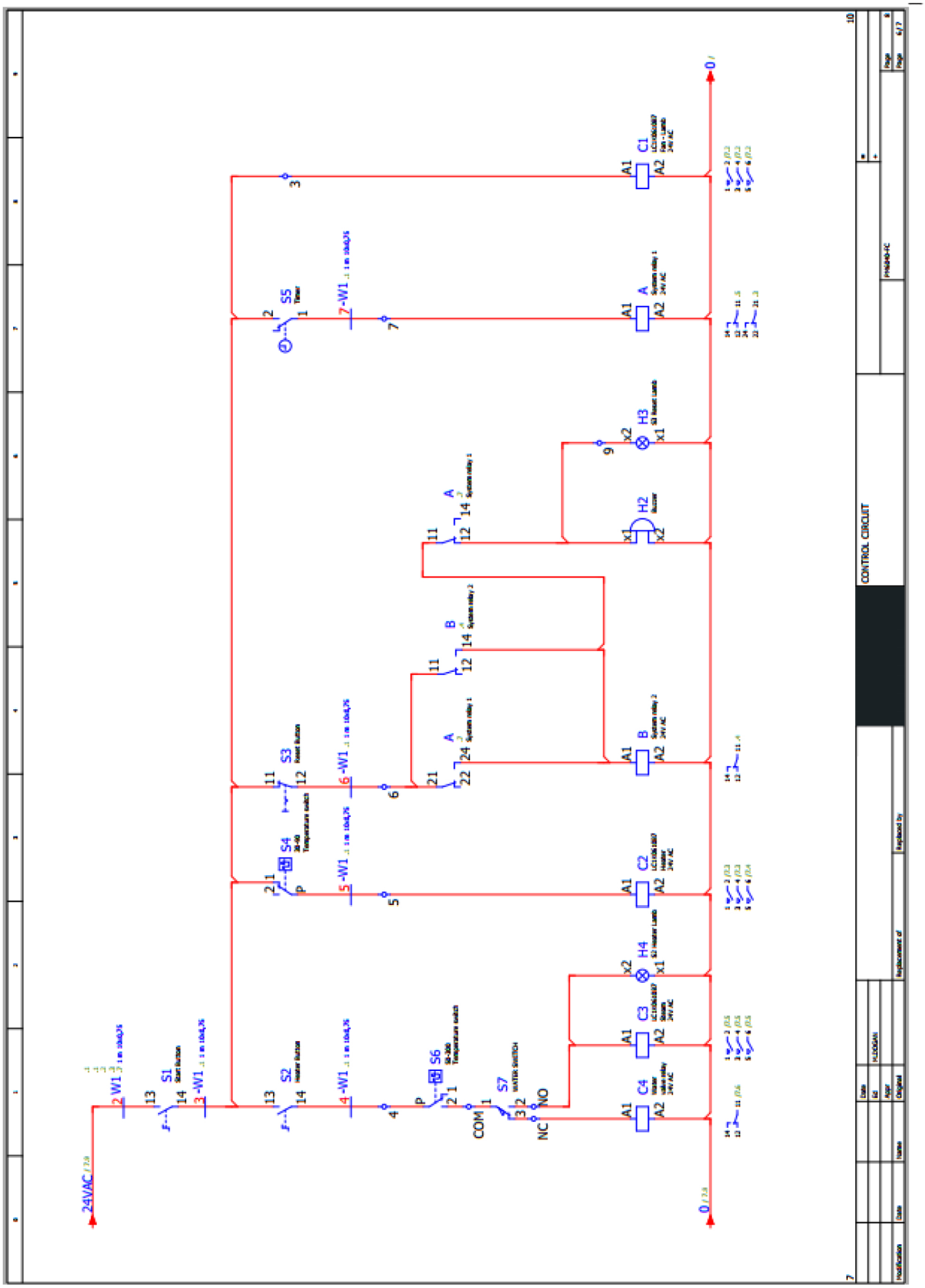


Figure 6.6 Electrical schematic diagram of the automation elements of the pre-proofer

7. POSSIBLE FAULTS

№ П/П	Description of the problem	Possible reasons	Solutions
1	If the burner does not start	The tightness of the burner is broken, gas leakage is possible.	See burner instructions.
		Low fuel pressure or no supply.	Check the fuel supply to the burner, increase the pressure.
		The safety thermostat is low acuation.	Check the correctness of the emergency thermostat threshold.
		False thermostat operation is possible.	Reset the emergency thermostat button to its original state.
		The thermostat sensor may be defective.	Replace thermostat sensor.
		Other burner equipment may be неисправным.	See burner instructions.
2	Горелка часто уходит в аварию	Low chimney draft, lack of air flow, drop in fuel pressure and quality.	Bring the chimney, supply ventilation, pressure and fuel quality to standard values.
		Not enough fuel.	Check the fuel supply to the burner, if necessary (the quality does not meet the standards), contact the fuel supplier.
		Alarm threshold settings may be insufficient.	See burner instructions.
3	Oven warms up slowly (with burner)	Insufficient burner power	See section Technical data
		Incorrect burner setting	Adjustments must be made by a certified technician.
4	The aspirator does not provide sufficient suction power;	Suction pipe, aspirator grilles are dirty.	Check the pipelines and clean them of dirt.

5	The air circulation fan does not turn on.	Motor thermal protection tripped, reset the alarm.	Check: voltage, reliability of stator contact connections, motor rotation without jamming, performance.
		The engine has failed.	Replace engine.
		The switch relay is faulty.	Check, clean, if necessary replace the switch relay.
6	The fan or aspirator is running at high noise, vibration;	Depreciation of the bearings on the electric motor, the fastening of the impellers has loosened.	Tighten the mount, replace worn bearings.
7	Aspirator does not turn on	No power supply.	Check electrical conductors and contact connections.
		Engine out of order	Replace engine.
		Digital controller error.	Reinstall controller management software.
8	The set temperature does not match actual;	The thermocouples in the thermostat may not be set correctly.	Place the thermocouple probe into the socket and make sure it reaches the support tube.
		The thermocouple may be damaged.	Replace thermocouple.
		Digital controller error.	Reinstall the controller management software.
9	Steam generator not working, low steam output.	The plumbing may be contaminated.	Clear the plumbing.
		Low water pressure in the system.	Check the water pressure (2-5 kPa) and contact the water supplier if necessary.
		The steam time may be too short.	Increase the time until the optimum balance is adjusted.
		The steam generator is dirty, calcified or its design is broken.	Clean the elements of the steam generator, check the integrity of the structure and its operation.

10	Continuous supply of water to the steam generator. Evaporator overflow.	Clogged or defective water supply solenoid valve	Dismantle and clean the valve elements inside, replace the valve if necessary.
11	Uneven baking of bakery products;	The temperature and baking time do not match the technology.	Adjust the temperature and baking time according to the technology.
		Gate gaps are not adjusted.	Adjust gate gaps.
		The quantity, size and shape of raw materials may not correspond to the specified baking parameters.	Check out the technology. The distance between the form (tray) and the baked dough pieces must be at least 20 mm.
12	Water seeps into the pre-proofer.	Clogged or defective water supply solenoid valve.	Disassemble and clean the valve elements inside, if necessary, replace the valve.
13	The lighting in the baking chamber does not work.	Burnt out light bulbs	Replace lamps. Be careful when replacing the halogen lamp, touching the lamp surface without clean gloves may shorten the lamp life.
			Use a light bulb with the appropriate wattage and voltage.
		The control circuit may be faulty	Check the circuit, replace the defective element.

8. MAINTENANCE

	**Maintenance of electrical equipment must be carried out by a suitably qualified electrician.**
	**Before starting maintenance, stopping for repairs and during sanitization, the power supply must be turned off by the input switch of the power cabinet in compliance with measures to prevent unauthorized supply of voltage.**

Periodicity	Structural element	Events
Daily	Oven glass and ceiling lamps.	Wipe the oven windows and ceiling lights. (at the end of the shift)
	Visual inspection	At the beginning and end of the shift, inspect the equipment for integrity and damage to the oven structural elements
1 Once a week	Controls	Check the effectiveness of the controls.
	Water supply elements	Check connections for continuity and leaks. Repair faults immediately if necessary.
	Efficiency of safety devices.	Check the emergency stop of the pin when opening the oven and the automatic activation of the aspirator.
	Openings of a decorative lattice, panels of the steam generator.	If necessary, clean the decorative grille. Do not leave water in the oven, which can lead to oxidation of the inner surface of the oven and its structural elements
1. Once a month	Fuel filter burner.	Check the integrity of the filter element. Replace fuel filter if necessary.
	Fasteners and tightness of the connection of the fuel filter.	Pull the connections and fasteners of the fuel filter.
1 Every three months	Steam injection system	Check and clean nozzles, replace if necessary
	Circulation fan heater and exhaust fan (aspirator)	Check and change the grease in the bearings, replace the bearings if necessary.

At least once every 4-6 months	Burner elements and controller.	Clean the dust with a vacuum device. Carry out an external inspection of the burner elements. Replace if necessary. (see burner user manual)
1 Once every 6 months	Water filters.	Check the water filter.
	Motor and rack rotation reducer.	Clean the cooling impeller and motor flanges. Check the operation of the emergency clutch and the freedom of rotation of the rack with the friction off. Check the oil level in the gearbox, top up if necessary.
At least once every 10-12 months	All components and elements of the oven with partial disassembly, cleaning.	Contact personnel authorized by the manufacturer.

The durability and efficiency of the worm gear is guaranteed by good lubrication. The oil can be mineral or synthetic based. Synthetic oil guarantees the highest efficiency, longer service life and the best viscosity index over a wide operating temperature range. The use of grease is not permitted.
The gearbox does not require any special maintenance. Check the oil level every 3 months.
The worm gearbox is filled with Hakuform GL - SAE 140 synthetic oil. Do not mix mineral and synthetic oils. When changing to another type of oil, the gearbox must be thoroughly flushed. The amount of oil is 0.5 kg.

9. WARRANTY

Guarantees the conformity of the product with the requirements of the current technical documentation and its trouble-free operation during the warranty period, provided that the consumer observes the rules for operation, transportation, storage and installation specified in this instruction manual.
The normal operation of the equipment is guaranteed only if the instructions of the operation manual are observed, the Company does not accept claims for the fulfillment of warranty obligations and is not responsible for damage to people and equipment breakdown that occurred due to the following reasons:

- if the equipment is not used for its intended purpose
- in case of incompetent installation, commissioning, maintenance
- when operating equipment with damaged or defective safety devices or their incorrect installation
- in case of non-compliance with the instructions in the operating manual
- when making changes to the design of equipment
- in case of incompetent repair work
- due to defects in the power supply line
- when replacing original equipment manufacturer parts with other parts
- in the presence of mechanical damage received during transportation
- in the event of force majeure circumstances that caused damage to the equipment.

Delivery of parts that failed during the warranty period due to the fault of the consumer, as well as those that failed during the period after the end of the warranty period, is made within the agreed time for a fee.
The replacement of parts that failed during the warranty period through no fault of the consumer is made after the presentation of the defect report and the failed parts.
Warranty period of operation - 12 months. The beginning of the warranty period is calculated from the date of shipment of the equipment to the consumer, unless otherwise provided by the supply contract.
The warranty does not apply to items whose normal wear and tear may not be controlled and is not dependent on the equipment manufacturer. These elements include: backlight lamps, indication lamps, as well as rubber products used to seal the joints of structural elements and gearbox transmission belts.
For warranty issues, contact the equipment supplier.
Warranty claims are accepted upon presentation of the completed "Commissioning, Repair, Maintenance Certificate" (Appendix 1). Be sure to check the complete filling of the data in the equipment passport on the title page of the instructions and the Act.
The company reserves the right to make changes to the design of the equipment that do not impair its quality and consumer properties, without being reflected in this instruction manual.
Permissible rock service - 10 years. Effective from the date of commissioning of the product.
At the end of this period, the equipment must be decommissioned for analysis of the technical condition. After that, a decision is made to repair, write off, or establish a new, designated service life. The analysis of the technical condition of the oven and the decision to repair, write off, establish a new, designated service life is made by the organization operating the equipment.