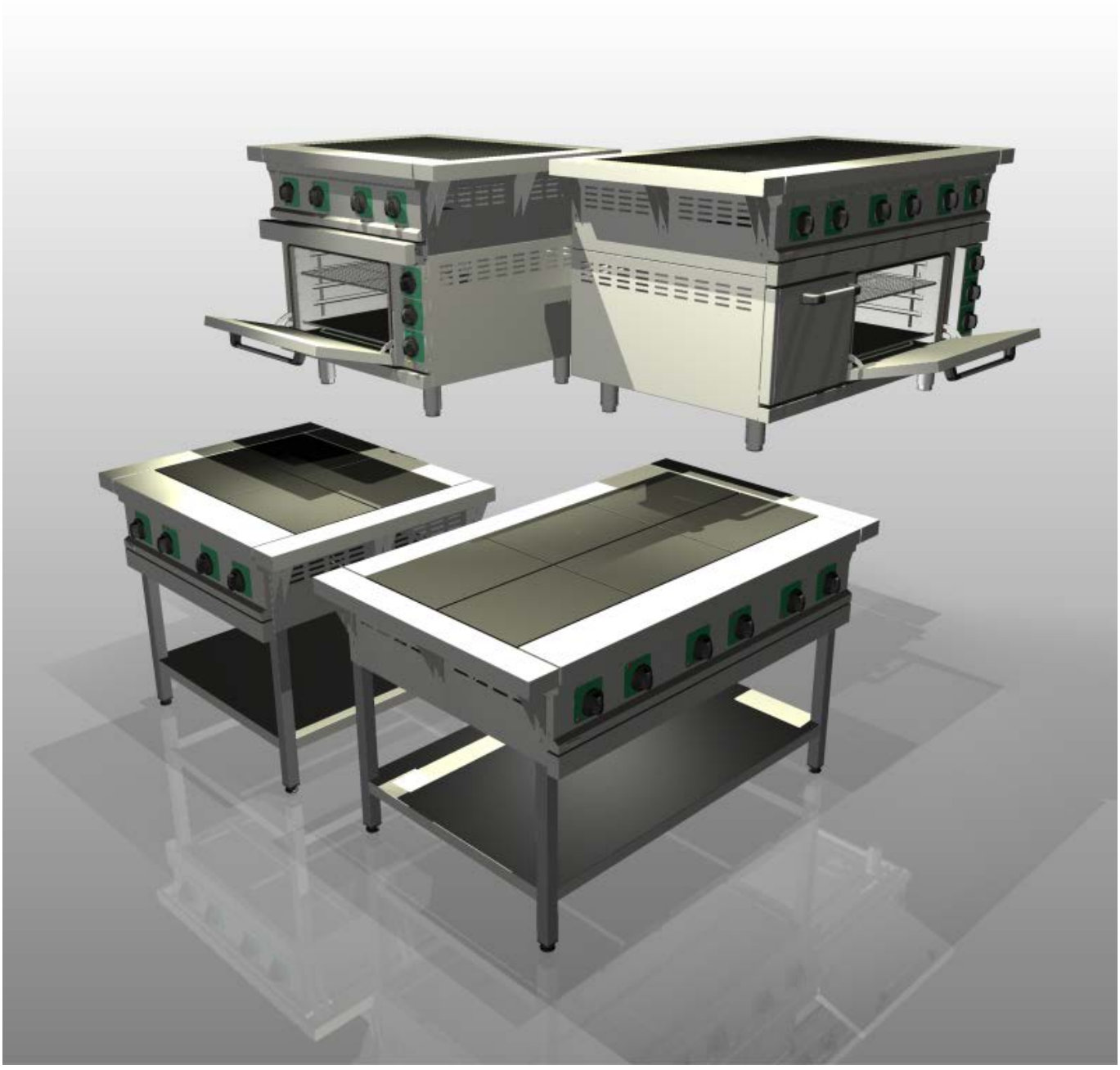
ELECTRIC RANGE WITH SHELVE
ASE-40, ASE-60
ELECTRIC RANGE WITCH OVEN
ASE-41, ASE-61



INDEX

1. SPECIFICATION

Electric range specification.

Description			ASE-			
			40	60	41	61
1	Rated power consumption	*kW*	12	18	18	24
2	Rated voltage	*V*	400/230			
3	Current	-	Neutral three-phase, alternating			
4	Current frequency	*Hz*	50			
5	Number of heating plates	*pcs.*	4	6	4	6
6	Heating plate dimensions	*mm*	295 x 418			
7	Heating plate input power	*kW*	3,0			
8	Frying area per plate (not greater than)	m^2	0,123			
9	Heating plates temperature	*°C*	480			
10	Oven input power	*kW*	-	-	6,0	
11	Rated power consumption of the oven upper tubular heaters	*kW*	-	-	3,0	
12	Rated power consumption of the oven lower tubular heaters	*kW*	-	-	3,0	
13	Heating time of the oven to maintain temperature 270	*h*	-	-	0,5	
14	Oven temperature control range	*°C*	-	-	50-270	
15	Quantity of thermo regulators	*pcs.*	-	-	1	
16	Quantity of thermo switches	*pcs.*	-	-	1	
17	Quantity of power switches	*pcs.*	4	6	6	8
18	Overall dimensions (not greater than): width/ depth/ height	*mm*	840/ 850/ 860	1264/ 890/ 860	840/ 850/ 860	1264/ 890/ 860
19	Overall dimensions with side countertops (additional parts) (not greater than): width/ depth / height	*mm*	1050/ 850/ 860	1475/ 890/ 860	1050/ 850/ 860	1475/ 890/ 860
20	Weight (not greater than)	*kg*	100	145	140	190

2. DELIVERY SET

Item		ASE-			
		40	60	41	61
Electric range	*pcs.*	1			
Operating manual		1			
Grating		-	-	1	
Packing		1			
Polyethylene bag		1			
Side countertops (additional parts)		2			

3. DESIGN AND OPERATING PRINCIPLE

The range consist of the upper module with heating plates on work-top and the bottom module with oven or with shelve (without oven).

Heating plates are established on adjustable studs with the help of which the heating plates are established in plane among themselves. On the front side, below the work-top there is a range control panel with switches and control lights. If the light is placed below switch then the switch is dedicated to front heating plate above the switch. If the light is placed over switch then the switch is dedicated to rear heating plate above the switch. Step regulation of the heating plate capacity is carried out by installation of the switch knob to position „1", „2", „3" that defines accordingly the heating degree: low, mean, high. Control light show pressure presence on the heating plate.

Below range control panel is located removable drainer for gathering liquid split on a working surface of the plate.

In the bottom part is placed, depending on model: shelve ASE-40 and ASE-60, oven with control panel ASE-41, oven with control panel and a cabinet ASE-61. The oven consists of metal skeleton with door, two blocks of tubular heaters located from above and from below in the oven, and removable lattices with guides. The bottom tubular heaters block is covered by metal plate (bottom plate). Lattices with guides, fixed on lateral walls, are intended for griddles installation at the necessary level. For heat loss reduction the oven case is wrapped up a thermal isolation with aluminum foil. For service and repair of the oven and electric wiring back revetment is provided.

On the right side of oven module is located control panel with 4-positions switch, control lights, thermo regulator and a thermo switch. Switch serve for switching ON, separate or both, top and bottom tubular heating blocks. To switch OFF tubular heater blocks set the switch knob to position "●". The thermo regulator serves for automatic maintenance of the set temperature in the oven chamber.

The emergency thermo switch serves for tubular heaters switching OFF at the oven temperature 340*°C*. For the oven work restoration it is necessary to reveal and eliminate the reason of operation of a thermo switch. Access to emergency thermo switch button is provided without the control panel removing. For this purpose remove the plastic plug and press by a core in diameter no more than 4*mm* on the thermo switch button located in an aperture.

Control light show pressure presence on tubular heaters and at achievement of the set temperature goes out, signaling about the oven availability.

4. SAFETY MEASURES

Operation of the electric range may only be carried out by personnel who have received proper training in operating or servicing catering equipment. At operating the electric range observe the following safety rules:

- to avoid burns be careful at moving ware, do not spill fat and other liquids on the hot range surface – the heating plate temperature is around 480°*C*;
- before cleansing establish the range switches to position "●" and disconnect the power plug;
- if fault is detected switch OFF the range and call an electrician;
- switch ON the electric range only after fault removal.

Strongly forbidden:

- to clean and fault removal while the electric range is switched ON;
- to cool the heating plates by water or other liquids;
- to keep unloaded heating plates and oven switched ON with full power (2nd and 3rd switch knob position);
- to work without grounding;
- to work without external protection;
- to operate the electric range without pallet.

General safety requirements:

- do not install the electric range closer than 1*m* from inflammable materials;
- at the electric range installation establish a switching protective armature, protecting fire factors: short circuit, overstrain, overload, spontaneous switching ON;
- at primary electric range installation if the leak current exceeds:
  at working temperature:
  - 26,0*mA* for ASE-40, ASE-60;
  - 36,0*mA* for ASE-41, ASE-61;

  cold:

  - 52,0*mA* for ASE-40, ASE-60 – establish the emergency circuit breaker 63*A* /100*mA*;
  - 72,*mA* for ASE-41, ASE-61 – establish the emergency circuit breaker 75*A* /100*mA* in the switchboard;
- the electric range connection should be carried out taking into account safe load on the electric system;
- do not use the electric range in fire-dangerous and explosive zones.

ATTENTION !!!

DO NOT apply water stream to the electric range clearing.

5. INSTALATION PROCEDURE

Electric range should be unpacked, installed and tested only by qualified kitchen equipment maintenance personnel. After the range is carried into a room let it stand at least 6 hours at a room temperature.

Install the electric range in the following order:

- before the electric range installation on the provide place remove the protective film from all metal surfaces. The electric range should be placed in well aired premise if there is a possibility, under an air-cleaning hood. The electric range can be placed separately or together with other kitchen devices;
- install the electric range not closer than 100*mm* from a wall;
- the electric range connection to the power supply should be done according to current legislation and specifications. Connections to the power supply is made only by the authorized specialist service taking into account marks on the tablet with inscription;
- installation and connection should be made so that on the established and connected electric range there was no access to current-carrying parts without application of tools;
- fuses for constant wiring should be provided:
  - on current 32*A* – for ASE-40, ASE-41, ASE-60;
  - on current 55*A* – for ASE-61;
- to established the electric range on a corresponding place; to level the electric range by adjusting legs so that working surface took horizontal position; the height should be user-friendly;
- to ground the electric range safely connecting ground wire to a ground clamp; the ground wire should be in a power cord;
- to insect connecting devices of the range electric circuits (screw and non-screw clamps), at slackening it is necessary to tighten or bend to normal contact pressure;

The power cord wire cross-section should not be less than the ratings listed in table below.

Device	Power cable designation (grade, number of wires and rated wire cross-section)
ASE-40, ASE-41, ASE-60	PCG 5x4,0
ASE-61	PCG 5x10,0

The power switch should provide secure disconnection of the power to all of the terminals in the electric range electrical equipment; it should be connected directly to the power supply terminals and the gap between the contacts on the terminals should not be less than 3*mm*.

After installation but before the electric range operation it is necessary to dry the heating plates tubular heaters and the oven tubular heaters during 1,5-2 hours, set the heating plate and the oven switches on the lowest heating degree (position “1”) and set the oven thermo regulator on 100°*C*. After drying check up current leakage. The leakage should be less than 1*mA* on 1*kW* of nominal power consumption. Check up grounding chains.

6. MAKEREADY

When preparing the electric range for operation, proceed as follows:

- to check up integrity and reliability of the electric range and heating plates grounding;
- to set by the thermo regulator knob the necessary temperature provided by technological process of a concrete product preparation;
- to carry out power adjustment by the switches knobs rotation; the heating plates switching on the higher position “3” should be made only for heating plates warming up to the working temperature or at dishes preparation demanding heats;
- upon work termination in high-temperature mode establish the switch knobs to position “1”;

Upon work termination establish the switch knobs to position “●”.

Disconnect the electric range.

ATTENTION !!!

Before the electric range operation it is necessary to remove preservation from grates, oven and back part of a door by soap solution.

Long heating plates work on modes “2” and “3” is undesirable.

7. USING

COOKING ON THE HEATING PLATES

Switch ON the heating plates by switches knob on necessary capacity, i.e. (position 1, 2 or 3), thus the alarm lamp on the left side of the switch lights up. The highest position “3” is used, mainly, in the beginning of cooking or frying when it is necessary to boil water or warm up the frying pan quickly. Put ware on the heating plate and start cooking. The lowest “1st” and middle “2nd” position are intended for long cooking and food heating.

COOKING IN THE OVEN

Before cooking it is necessary to warm up the oven. Established the thermo regulator knob on temperature 150-180°*C*, and switches knobs – on the position that is intended for heating top and bottom tubular heating blocks. On reaching the established temperature the thermo regulator disconnects heaters to what the first the control light switching OFF then further temperature increase by rotation of thermo regulator knob. At cooking it is necessary to specify the recommended temperature and at the subsequent preparation the temperature regulator can be established on higher or lower temperature, depending on the cooked product quality.

Transition to the “1st” and the “3rd” power level of the top or bottom tubular heating blocks at batching depends on a product color from above or from below, defined by good straw or dark color of a batch.

8. MAINTENANCE

All maintenance work should be performed by a III-V skill-category electrician having at least the third safety engineering skill level.

Maintenance operation should be undertaken once per month and for repair operation – once every six months.

In performing maintenance operations, follow these instructions:

- identify the trouble(s) through the assistance of the operating personnel;
- make sure that the temperature relay sensors, limit switch, lightning accessories and covering are securely fixed;
- make sure that there are no loose connections in the current-carrying parts of the electric range.

Before the contact joints, retention parts of the thermo regulators and lightning accessories checking, be sure to disconnect the electric range by removing the fuses or switching OFF the automatic circuit breaker on the distributing switchboard, attach a notice "*Do not switch ON. The unit is under maintenance*" to the handle of the switching equipment, and disconnect the range power cables and insulate them as required.

9. TROUBLESHOOTING

All problems in the electric range malfunction are resulted in table below and should be removed by duly qualified technicians only.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Electric plates do not heat up, the power supply control lights burns. Heating plate poorly heat up.	- Break of a neutral wire. - The switch is defective. - Blowing of the heating plates tubular heaters spirals. - Poor wires contact in switches.	To eliminate wire breakage. To replace the switch. To replace heating plates tubular heaters. To restore wire contact.
Control lights of heating do not burn, heating plates heat up.	- The control light have burnt out. - Poor contact in the control lights wires.	To replace fused control light. To restore wire contact.
The oven doesn't heat up, switches and thermo regulators are switched ON, lights do not burn.	- There is no power supply. - Wires fastening on entry posts of the block had loosened. - Thermo regulators, thermo switches are defective. - Switches are defective. - The emergency thermo switch went OFF.	To supply voltage. To fix wires on entry posts of the blocks. To replace defective details. To switch ON the emergency thermo switch.
The oven heats up poorly.	- One of the oven is defective. - Tubular heater are defective.	To replace the switch. To replace tubular heaters.
Gapping of the oven door.	- Gasket are worn out.	To replace gasket.
Spontaneous opening of the oven door.	- The hinge is broken.	To open the oven door and to replace a hinge.

10. TRANSPORTATION AND STORAGE CONDITIONS

The electric range must be stored in a cargo container of the manufacturer by the storage condition group 4 GOST 15150 standard at an ambient air temperature not low than -35*°C*.

Storage period is not more than 12 months.

At period of storage over 12 months the owner of the electric range is obligated to make product re-conservation in accordance with GOST 9.014 standard.

The packed electric range is to transport railway, river, motor transport according to operating rules of transportation on these types of transport. Sea and other types of transport are applied under the special agreement.

Conditions of transportation to parts of influence of climatic factors – group 8 in accordance with GOST 15150 standard, regarding influence of mechanical factors – C in accordance with GOST 23170 standard.

Loading and unloading of the electric range from vehicles should be made cautiously, without supposing blows or pushes.

ATTENCION!!!

The packed electric range are supposed to be stored on height in two circles for storage.

11. ENVIRONMENTAL PROTECTION RECOMMENDATION

On ending its useful life, this product must not be thrown away in a standard rubbish bin, but must be left in an electrical waste and electronic equipment collection point for recycling.

This is confirmed by the symbol on the product, user manual, or packaging.

By preparation and the electric range sending on recycling disassemble and sort out components on materials of which they are made.

Depending on the symbol, the materials can be recycled. By recycling and other ways of processing electrical waste and electronic equipment, you can significantly contribute to protecting the environment.

Contact your local authorities for more information of the nearest collection point.

To conserve the environment at the end of the useful life of your product. Leave it in the appropriate places in accordance with the current legislation.

This appliance is only for professional usage and must be used by qualified personnel.

12. TECHNICAL DRAWINGS, ELECTRIC DIAGRAMS

Tab. 1 List of components.

Designation	Item	Quantity	Note
HL1…HL9	Signal light	4 – ASE-40 6 – ASE-60 7 – ASE-41 9 – ASE-61	
SK1	Thermo switch	0 – ASE-40_60 1 – ASE-41_61	
SK2	Thermo regulator	0 – ASE-40_60 1 – ASE-41_61	
KM1…KM2	Contactor	0 – ASE-40_60 4 – ASE-41_61	
SA1…SA8	4-position switch	4 – ASE-40 6 – ASE-41_60 8 – ASE-61	
EK1.1…EK1.6	heat elements 3,0kW	4 – ASE-40_41 6 – ASE-60_61	
EK2.1…EK2.2	heat elements 2,4kW	0 – ASE-40_60 2 – ASE-41_61	

Diagram 1 ASE-40 electric circuit.

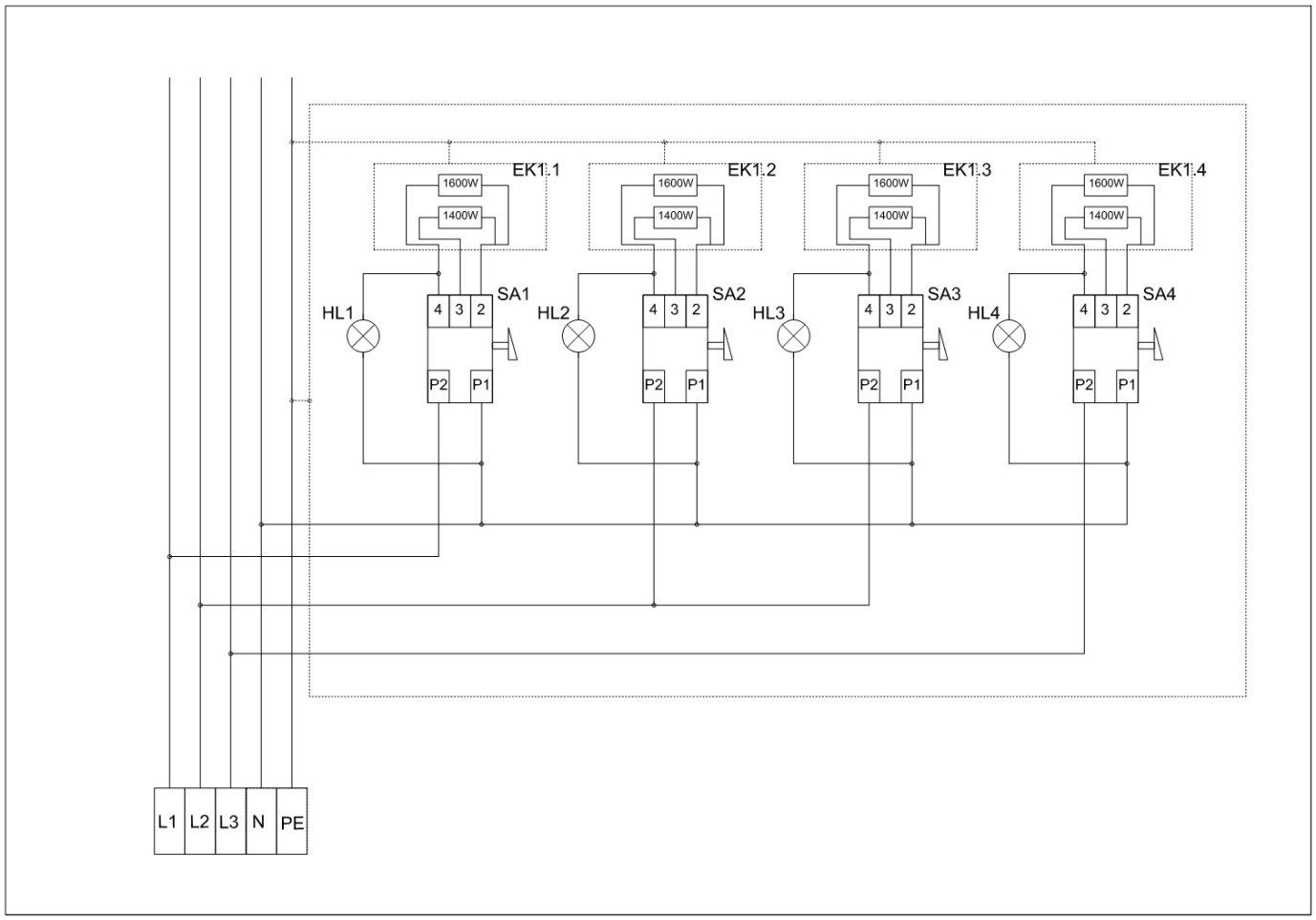


Diagram 2 ASE-60 electric circuit.

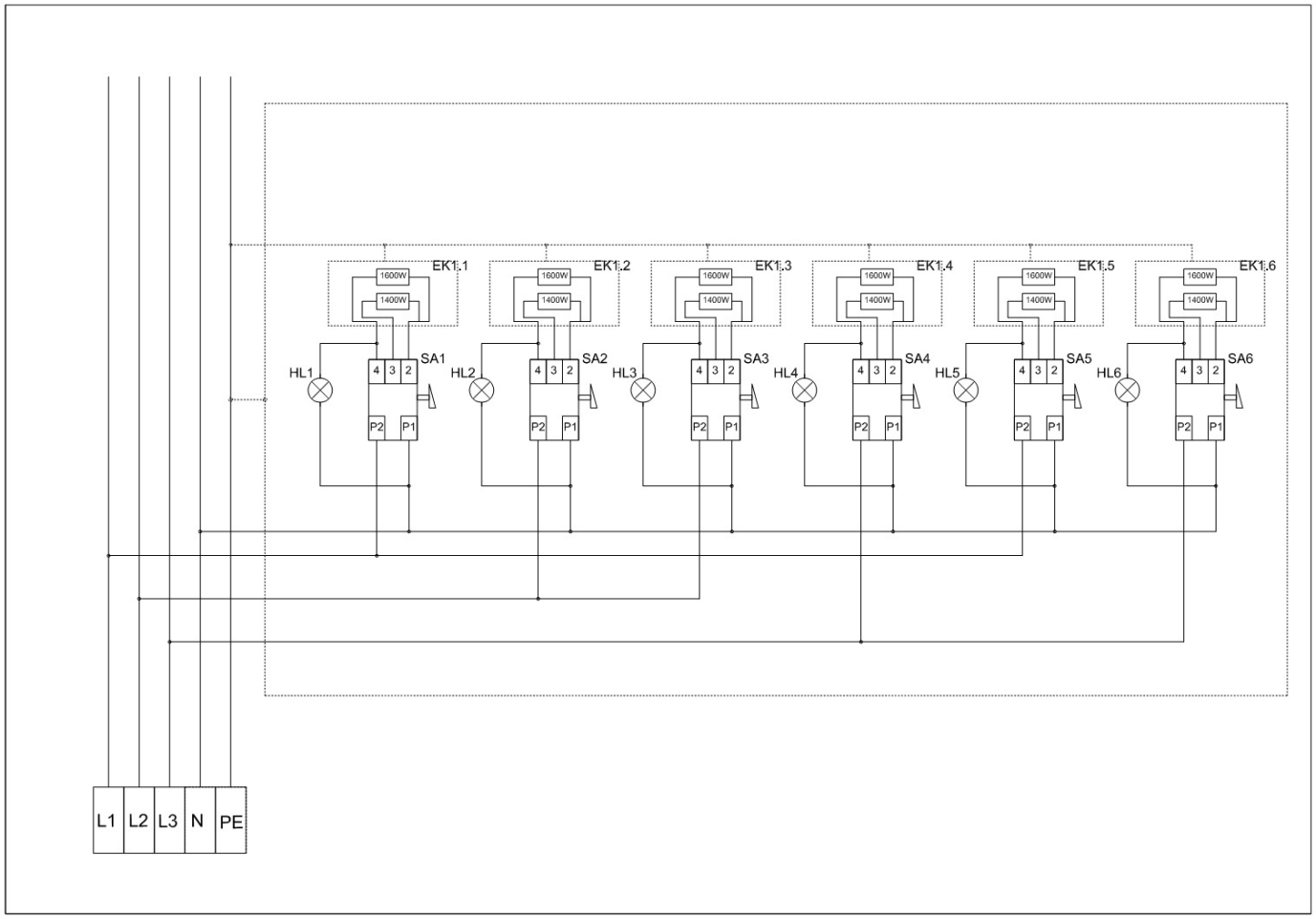


Diagram 3 ASE-41 electric circuit.

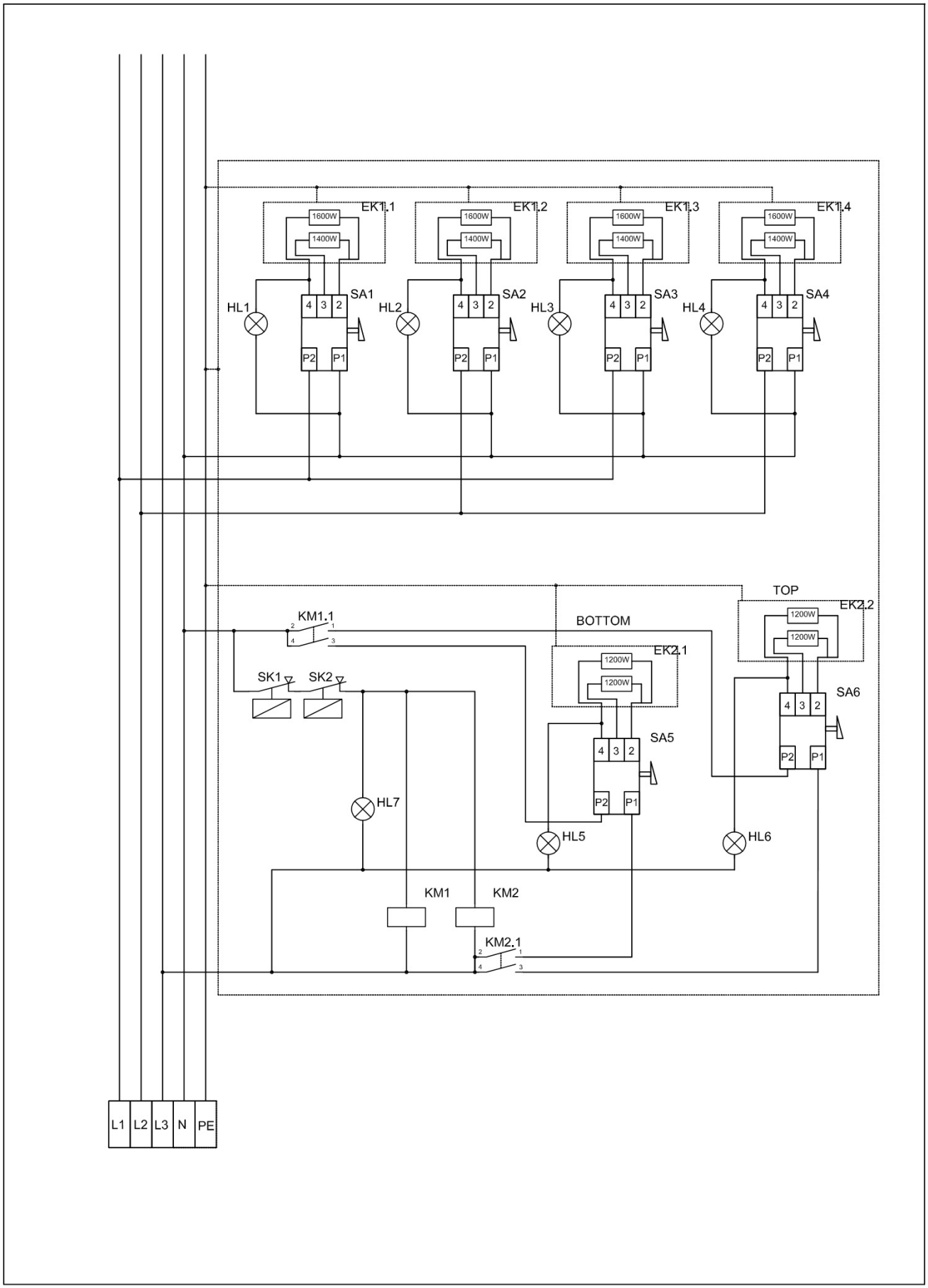


Diagram 4 ASE-61 electric circuit.

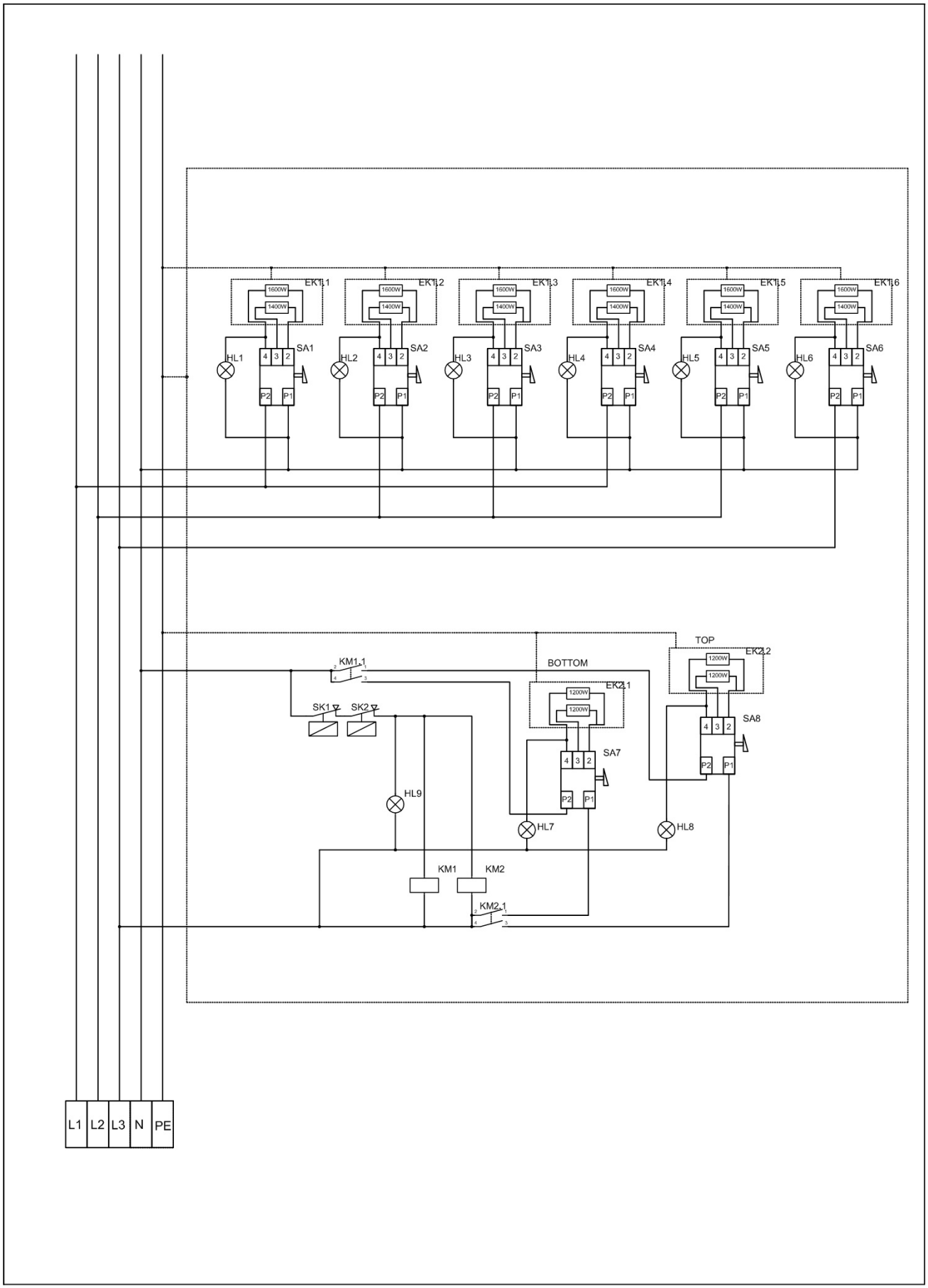


Fig. 1 Switching table.

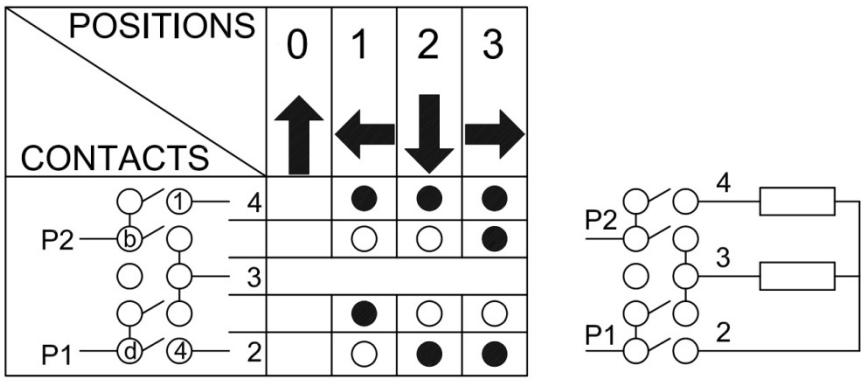


Fig. 2 Thermal switch plug.

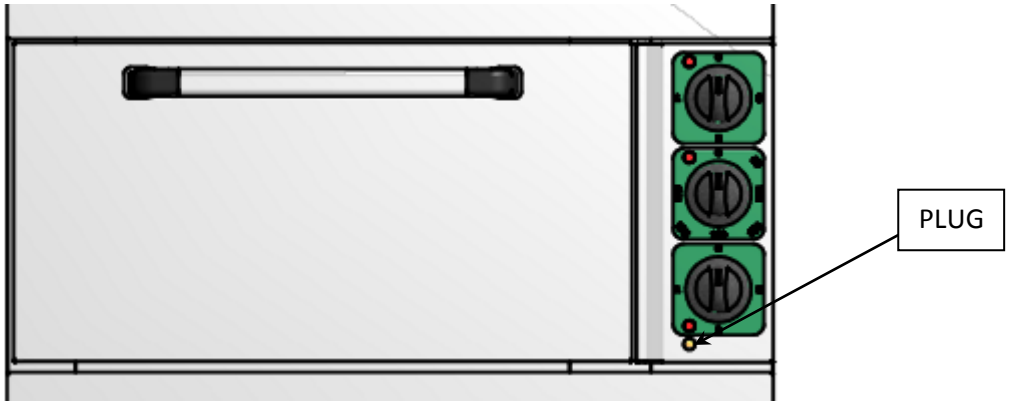


Fig. 3 ASE-40 dimensions.

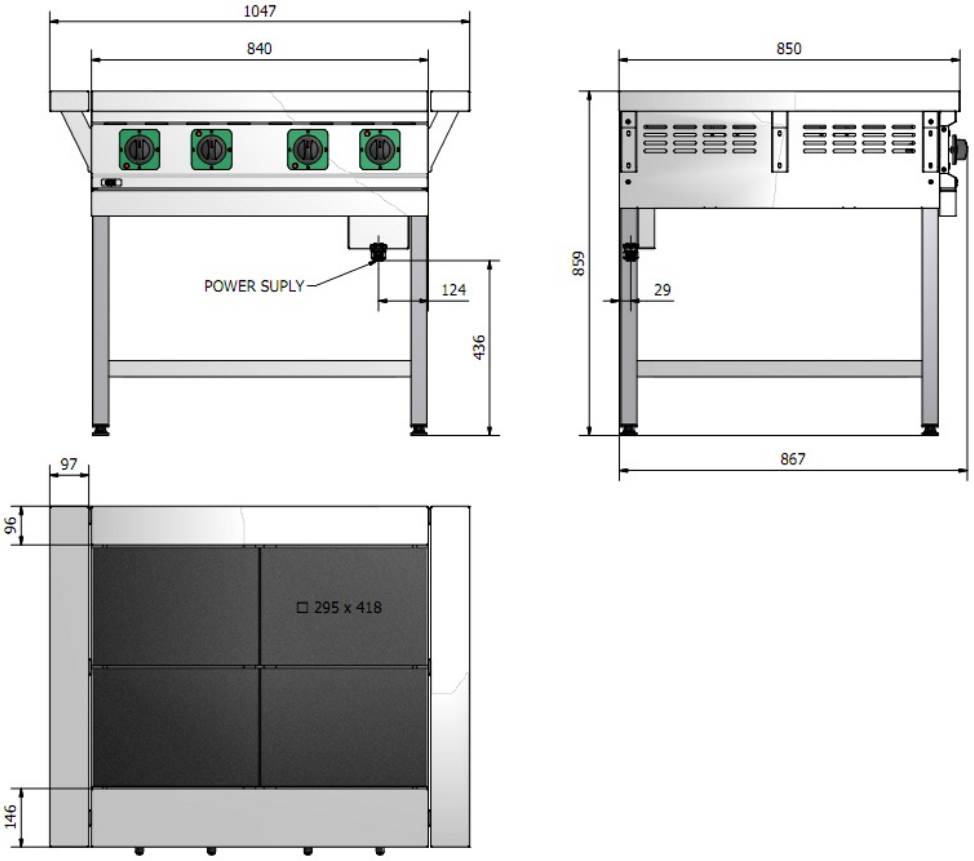


Fig. 4 ASE-41 dimensions.

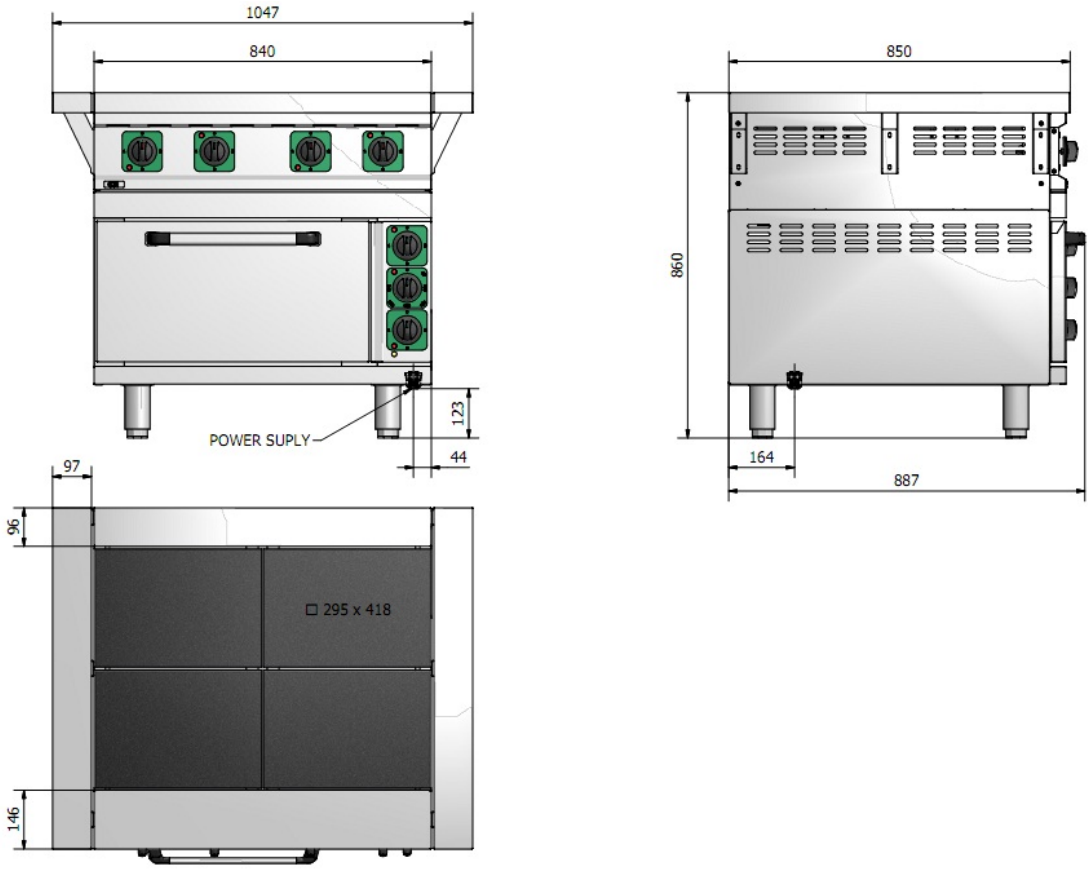


Fig. 5 ASE-60 dimensions.

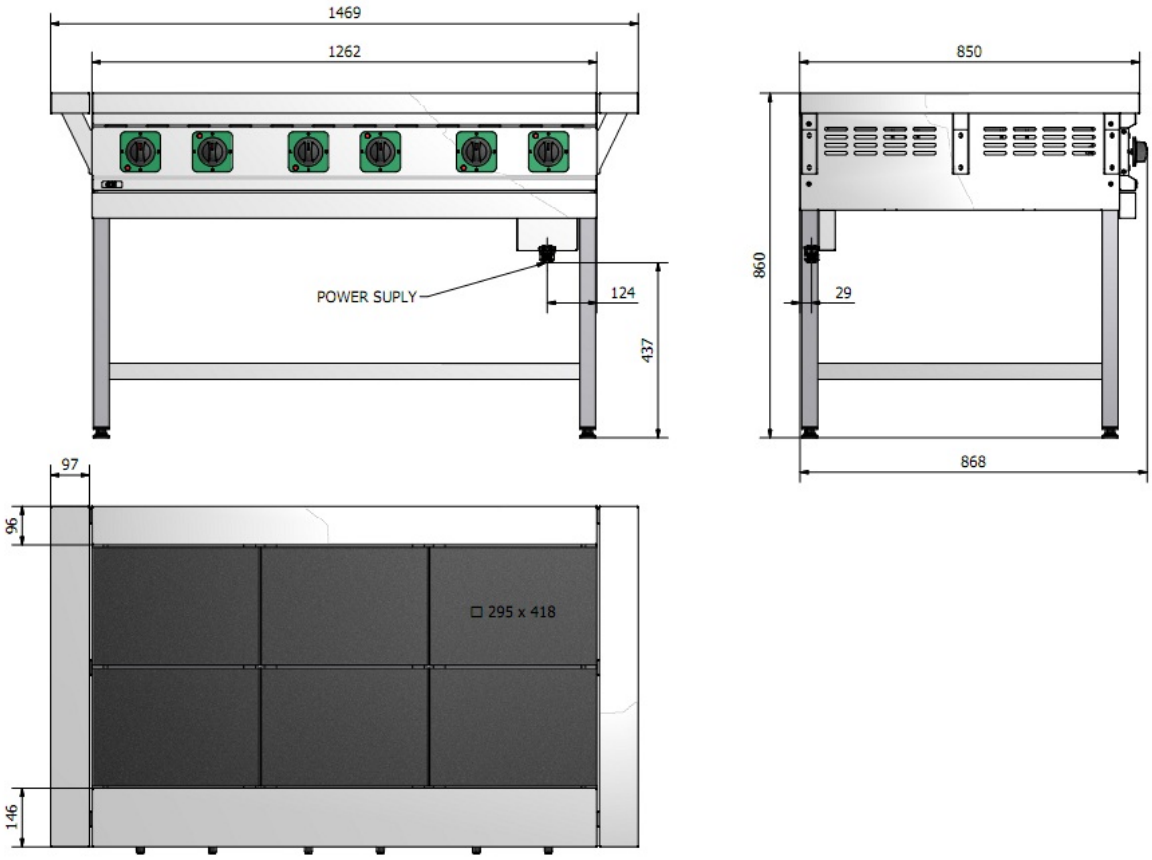


Fig. 6 ASE-61 dimensions.