### **Mod: TPE2-12**

**Production code: TP12/E** 



### Installation, Operation and Maintenance Instructions

### Teppanyaki Electric

### Model:

TP-12/E Eight Flat Heaters

Oil Drip Pan-Floor Model

TP-12/E Portable Eight Flat Heaters

Oil Drip Pan-Portable Model

TP-15/E Ten Flat Heaters

Oil Drip Pan-Floor Model

TP-15/E Portable Ten Flat Heaters

Oil Drip Pan-Portable Model

Note: The picture is illustration only. We reserved the right to make technical changes in the interest in progress without prior notice.

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# General Information

### General Information

### Information for the Reader



Please read this manual instruction carefully before operating this appliance.

To find the specific topics of interest to you quickly, refer to the index at the start of the manual. This manual is written to:



All the information is instructed to general readers, i.e for users of the appliance.



All the information is instructed for special categories of reader, i.e. all skilled operators authorized to handle, transport, install, service, repair and scrap the appliance

The skilled operators may also read the information for the general readers for a more complete picture of the information provided if necessary.

### Warning, Signs and Symbols



### Warning

Warnings are indicated with a pictogram and a signal word.

The type and source of the risk as well as the consequences are described together with instructions for avoiding the danger. The margins of the pictograms and signal words used are explained in section "Signs" and "Symbols"

### • Signs



Electric Shock Hazard or High Voltage

Imminent danger

→ Non-observance leads to death or serious injury (caused by electric shock)



Hot Surface

Dangerous situation

ightarrow Non-observance can lead to slight or semi-serious injury (caused by hot surface)



Warning

Damage

→ Non-observance can lead damage



Pace Maker (Especially for Induction)

Possible Danger

→ Non-observance can lead to death or serious injury



Injury Risk

Possible Danger

→Non-observance can lead to death or serious injury





→ Connect wire to the earth



### Important

→ non-observance can lead damage



### Note

→ Note for special appliance



### Attention

 $\rightarrow$  Non-observance can lead damage



### User sign

 $\rightarrow$  information must be read by user



### Technician sign

 $\rightarrow$  information must be read by technician



### CE Certification

→ The appliance have a license of CE Certificate

### • Symbols

Symbols	Meaning	Explanation
1.	Instruction, single step	Instruction must be followed in the
2.		order given
Bullet points, such as	Instruction, multiple steps	Instruction can be carried out in any
"•", "_", " etc		sequence
$\rightarrow$	Instruction, multiple steps	An action is required here

### General Information of the Appliance



Nayati Teppanyaki Electric is an excellent cooking appliance made of stainless steel. It uses 420 SS of Griddle plate and equipped with oil drip pan and two gas taps or three gas taps. The power rate is 12.8 kW for eight flat heaters and 16 kW for ten flat heaters. This appliance is especially designed for cooking Japanese cuisine: sautéing. Unit to be installed free standing can be joined with base cabinet, table stand or cantilever system or portable model that easy to be brought. The appliance also equipped with Thermostat to adjust the cooking temperature (50° C up to 300° C). It is very important to keep this instruction book together with the appliance for future consultation. If this appliance sold or transferred elsewhere, make sure this book goes with it. Therefore, the new user can read about its functions and other relevant information.

### Procedure for Requesting Service and Warranty



### Requesting Service

Contact one of the authorized service centers or NAYATI for all requirements. When requesting service, state the data provide on the nameplate and provide a description of the fault.

### Warranty

NAYATI gives 12 months guarantee with certain conditions. NAYATI will decline any claims of accidents caused by improper use, disobey rules, and/ or disobey warnings. Below are cases, which invalidate the guarantee:

- 1. Improper use by untrained person(s)
- 2. Disobey local regulation(s) related to installation and safety standards
- 3. Not doing routine maintenance
- 4. Replace certain parts with non-genuine spare part
- 5. Do not follow the manual instructions properly

If you have any doubts or questions related to our product, please call your nearest dealer or call NAYATI.

# Safety Instruction

### Safety Instruction





**Important!** Before installing, place the appliance on solid, flat, stable and horizontal surface and connection availability.

Read this manual instruction carefully before using NAYATI Teppanyaki Electric. This appliance is for food preparation only. Below are safety instructions that strictly conformed:

- 1. Improper installation, maintenance, cleaning, or modification to the appliance could lead to severe injury or death and could damage the appliance.
- 2. The mechanics must instruct staff regularly to avoid accident and damage of the appliance.
- 3. NAYATI Teppanyaki Electric may be used for skilled staff only.
- 4. DO NOT place the appliance in a toxic area or have a risk of explosion.
- 5. DO NOT place the appliance near flammable materials such gasoline, fat, clothes, liquid gas, paper, etc.
- DO NOT place the appliance in wet or humid room or condition such in rain or near water leaks, etc.
- 7. DO NOT use the appliance for drying clothes, paper, or living animals.
- 8. DO NOT use the appliance to heat non-food products.
- 9. Put the appliance in a good ventilated room.
- 10. Before cleaning or maintaining the appliance, detach the electric cable and allow it to cool.
- 11. DO NOT touch the area fithis sign means hot surface. Beware of severe burning injury.
- 12. DO NOT attempt to dismantle or repair the appliance. The authorized mechanics must do all jobs.



### **ELECTRIC SHOCK HAZARD!**

- Authorized and qualified mechanic can do the maintenance and repairs.
- Turn OFF and disconnect the appliance before opening front panel and accessing electrical area inside the appliance.



### **INJURY RISK!**

- Avoid Electric Teppanyaki installation next to fat Fryer.
- Water could splash into the Fryer and may injure the user.
- It is recommended to keep a safe distance between Electric Teppanyaki and other kitchen equipment like Fryer.

### Technical Data





Table 1 Technical Specification of Teppanyaki Electric TP-12E

	Technical	Specificat	tion					
Model		TP-12/E		TP-	12/E Portal	ole		
Overall Dimension (mm)	Width Depth Height			Width	Depth	Height		
	1200	770/870	850	1200	770/870	450		
Griddle Plate Dimension (mm)	960	550	20	960	550	20		
Temperature Setting	50° C – 300° C 50° C				0° C – 300° C	C – 300° C		
Number of Heaters	8 (Flat Heaters)			8 (Flat Heaters)				
Electric Consumption	8 x 1.6	kW (each l	heater)	8 x 1.6 kW (each heater)				
	12.8 kW				12.8 kW			
Electric Connection	3N AC	400 V ; 50	/ 60 Hz	3N AC	400 V ; 50 /	60 Hz		
Required Electrical Supply (amps)		22			22			
Direct Heat Emission (kW)	4.22			4.22				
Latent Heat Emission (kW)	5.12				5.12			
Steam Emission (Kg/h)		7.52			7.52			

Table 2 Technical Specification of Teppanyaki Electric TP-15E

Technical Specification											
Model		TP-15/E		TP-	15/E Portal	ole					
Overall Dimension (mm)	Width	Depth	Height	Width	Depth	Height					
	1440	770/870	850	1440	770/870	450					
Griddle Plate Dimension (mm)	1200	550	20	1200	550	20					
Temperature Setting	50° C – 300° C 50° C – 300° C					C					
Number of Heaters	10 (Flat Heaters)			10 (Flat Heaters)							
Electric Consumption	10 x 1.0	6 kW (each	heater)	10 x 1.6 kW (each heater)							
·		16 kW		16 kW							
Electric Connection	3N AC	400 V ; 50	/ 60 Hz	3N AC	400 V ; 50 /	60 Hz					
Required Electrical Supply (amps)		29			29						
Direct Heat Emission (kW)	5.28 5.28			5.28							
Latent Heat Emission (kW)		6.40			6.40						
Steam Emission (Kg/h)		9.40			9.40						

Data Plate



Figure 1:

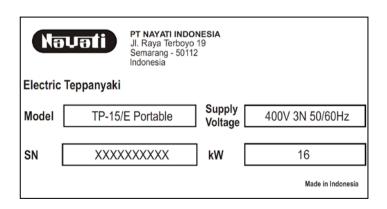
Technical plate reports the current setting.

Na	vəti	PT NAYATI INDO Jl. Raya Terboyo Semarang - 5011: Indonesia	19	
Electric	Teppanyaki			
Model	TF	12/E	Supply Voltage	400V 3N 50/60Hz
SN	XXXX	XXXXXX	kW	12.8
				Made in Indonesia

Fig. 1

Na	vəti	PT NAYATI INDO Jl. Raya Terboyo Semarang - 5011: Indonesia	19	
Electric	Teppanyaki			
Model	TP-12/	E Portable	Supply Voltage	400V 3N 50/60Hz
SN	XXXX	XXXXXX	kW	12.8
				Made in Indonesia

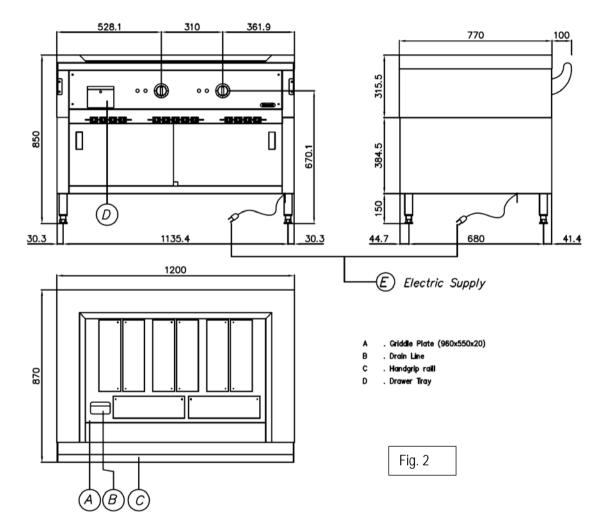
Na	vəti	PT NAYATI IND Jl. Raya Terboy Semarang - 501 Indonesia	o 19	
Electric	Teppanyaki			
Model	TP	-15/E	Supply Voltage	400V 3N 50/60Hz
SN	XXXX	XXXXXX	kW	16
				Made in Indonesia



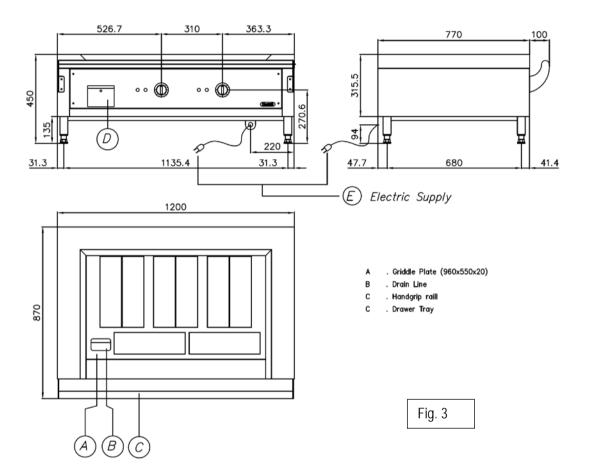
### Overall Dimension



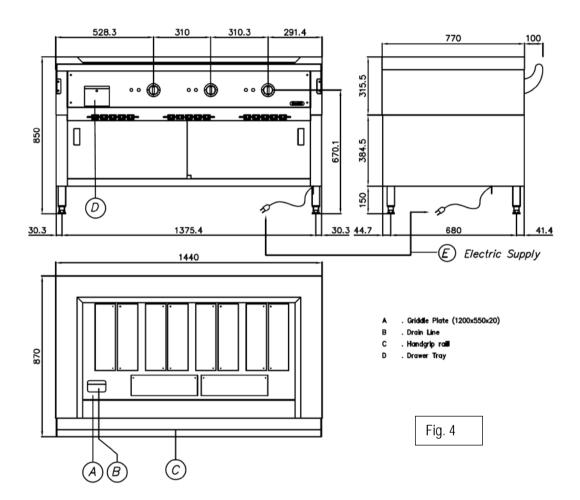
### TP-12/E



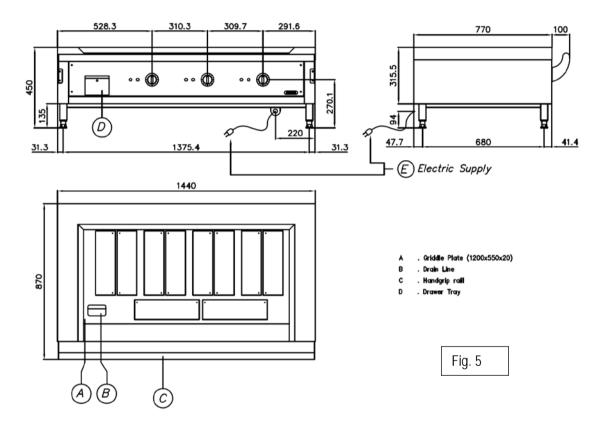
### TP-12/E Portable



### TP-15/E



### TP-15/E Portable



# Handling and Installing

### Handling and Installing





**Important!** Before installing, place the appliance on solid, flat, stable and horizontal surface and connection availability.

The following instructions are intended for authorized and qualified installer. Before doing installation, adjustment, and maintenance operations, the installer must follow local and legal regulations. Cut the electrical power before doing any installation.

- 1. This appliance is using electric power. Electric services should be installed according to:
  - a. Local and international standards
  - b. Local recommendations related to building standards and codes
  - c. Directions and regulations from power supply companies
  - d. Regulation concern with prevention accident measures
  - e. Fire prevention regulations
  - f. Applicable I.E.C (International Electro technical Commission) regulations
- 2. Remove all packaging material and protective coatings.
- 3. Ensure electric power supply is sufficient to operate this appliance.
- 4. Before testing, put the appliance in a good ventilated room and keep all flammable material away.
- 5. Before cleaning or maintaining the appliance, please cut off electric power and isolate gas supply (if any) to the safe place.

### Packaging and Transport



### Packaging

The packaging is designed to reduce space and as appropriate to the type of transport used. To simplify transport, some components may be removed and suitably protected and packed for transport.

The packaging carries all information necessary for loading and unloading. When unpacking, check that all components are present in the correct quantities and are undamaged. The packaging material must be properly disposed of in accordance with legal requirements

### Transport

Different means of transport may be used, depending partly on the destination.

During transport, fix the packaging to the means of transport securely to prevent undesirable shifting.

### Handling and Lifting



The appliance can be handled using fork-lift or hook equipment of suitable load-carrying capacity. Before lifting, check the position of the load's centre of gravity.

### Safety Devices and Accessories



The appliance is provided with safety devices. The additional devices must be added if necessary to comply with the relevant legal requirement during the installation. There are no accessories for these appliances.



**Important!** Make the daily check that the safety devices are properly install and in good working order.

### Position and Fixing



- 1. Authorized personnel must do the installation.
- 2. Install the appliance according to National Safety Standard about electric-heated standard.
- 3. Install the appliance under an extractor fan to remove the cooking fumes.
- 4. Make sure that any object around or under Teppanyaki Electric does not obstruct air volume required for air circulation.
- 5. Put away any flammable materials near Teppanyaki Electric.
- When the appliance is freestanding, keep a distance at least 10 cm from side, and rear walls.
   Especially when the appliance close to wall and does not protected with fire-resistant materials made.
- 7. Install the appliance separately or side by side with other appliance according to recommended range.
- 8. Put Teppanyaki Electric on solid, flat, and horizontal surface.
- 9. Adjust the height of the four feet by using brackets.
- 10. Before turn the appliance ON, remove the protective film. Remove any adhesive with appropriate solvent.
- 11. Eliminate all packaging material according to national laws.

### **Electric Power Connection**



- 1. Before connecting the appliance to the main supply, compare the electrical data in the rating plate (on the appliance side panel) to the local electric energy supply. Make sure the main voltage correspond to the voltage indicated on the nameplate of the appliance.
- 2. Registered installation companies must do the electric installation concerned with certain local and national regulations. The companies are responsible for interpret all regulation and perform the installation and safety instructions. The warning signs and nameplates must strictly conform.
- 3. The appliance equipped with a power terminal and connected with power cable and power socket.
- 4. DO NOT put the power cable near heat sources or water leakage area.



### **WARNING!**

To avoid electric shock, it is necessary to have earth connection. You can find the earth connection at the terminal boards, identified with symbol to where earth wire has to connect.



### **WARNING!**

Incorrect voltage may damage the appliance.

- TP-12/E (3N AC 400V 50/60Hz 12.8kW)
- TP-12/E Portable (3N AC 400V 50/60Hz 12.8kW)
- TP-15/E (3N AC 400V 50/60Hz 16kW)
- > TP-15/E Portable (3N AC 400V 50/60Hz 16kW)

# Use and Operation

### Use and Operation





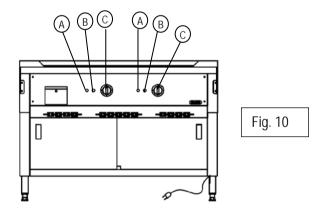
This appliance is an electric cooker for professional use. It shall be used by authorized people only. Before starting, please make sure that the appliance is in good condition and put it in a good ventilated room. Below are several preliminaries warning that strictly conformed:

- 1. If there is a persistent breakdown, please contact authorized mechanic.
- 2. User is only responsible for daily routine cleaning for maintenance.
- 3. Qualified mechanics must do all operations related to installation and maintenance according to Regulation in force.
- 4. Use this Teppanyaki Electric only for COOKING JAPANESE CUISINE: SAUTÉING. DO NOT use the Teppanyaki Electric for other purposes. Any other uses may be considered as improper and dangerous use. Please control the appliance when operating.
- 5. Before operating Teppanyaki Electric for the first time, carefully clean the appliance to remove industrial oil/ lubricant.
- 6. After using the Teppanyaki Electric, turn the knob to OFF position.

### **Control Panel Description**



For example: TP-12/E



A : Green Pilot Lamp

to indicates the appliance is ON / OFF

B : Yellow Pilot Lamp

to indicates the heating process is working

C : Thermostat Control Knob

to turn ON / OFF and adjust the cooking level temperature.

### Switch ON/OFF



### Turn the Appliance ON

- 1. Turn the Thermostat Control Knob to the right. The Green Pilot Lamp will light indicate that the appliance is ready to use.
- 2. Turn the Thermostat Control Knob to the right again to increase the temperature. The Yellow Pilot Lamp will light to indicate the heating process is working. The temperature range is  $50^{\circ}$  C up to  $300^{\circ}$  C.
- 3. When the set temperature has reached, the Yellow Pilot Lamp will be OFF. If the temperature decreases, the lamp will light again.

### Turn the Appliance OFF

- 1. Turn Thermostat Control Knob to zero (0) position.
- 2. The Green Pilot Lamp will OFF to indicate the appliance is OFF.

# Routine Cleaning an

### Routine Cleaning and Maintenance



Clean the appliance to keep the functionality and durability. In the case of any failures, do not attempt to solve the problem but call your dealer immediately to ask for help. Do not attempt to dismantle the appliance, specialized mechanics must do all job.

For routine cleaning process, please follow procedure below and notice the warning:

### Cleaning the plate



- 1. Make sure the gas valve on UP position, the appliance is closed, and the circuit-breaker to disconnect it from the electrical mains is OFF.
- 2. Let the appliance cool.
- 3. Clean the steel part daily with warm soapy water, rinse and dry thoroughly. Please make sure that the cleaning product does not contain Chlorine (bleach, hydrochloric acid, etc), using steel wool, brushes, or scrappers that could leave ferrous particles. These materials could oxidize and causes rust on the appliance.
- 4. Spread a suitable degreaser on the plate and leave it to act for a few minutes.
- 5. Clean the plate thoroughly with a sponge, rinse with plenty of water and dry
- 6. DO NOT leave acid food such as vinegar, salt, lemon, etc on the stainless steel parts because it can ruin them.
- 7. NEVER wash the appliance with direct high-pressure jet water.
- 8. If the cooker will not used for a long time, briskly rub the steel part slightly with a damp cloth and Vaseline oil. After that, wrap with protective film and put the appliance in a good ventilated room.

### \$

### ATTENTION!

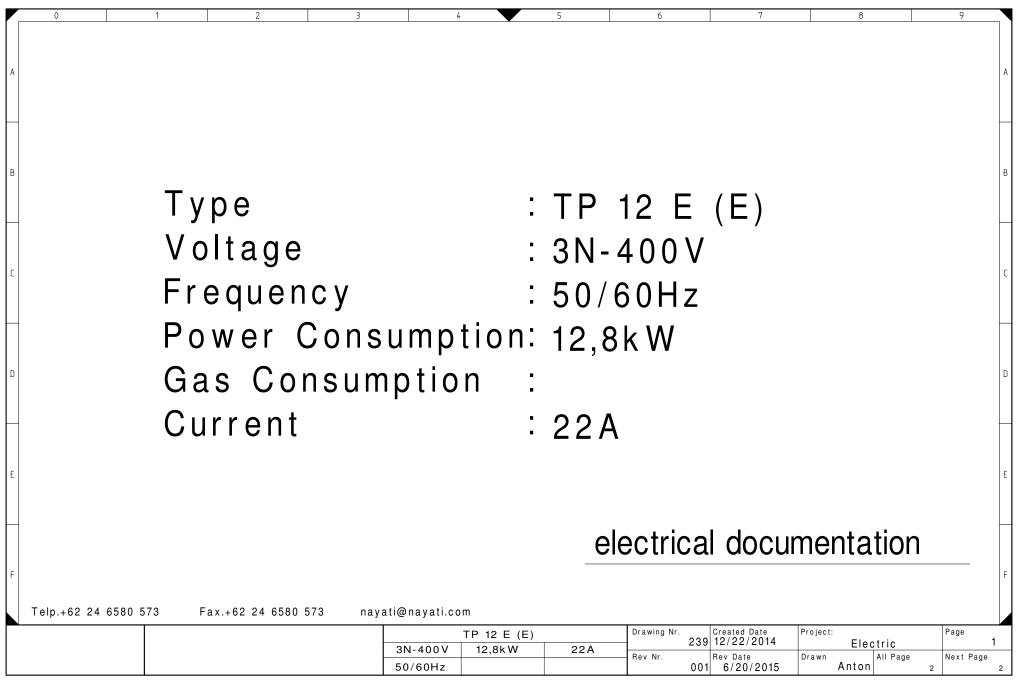
- ! If you find the lighting and control devices are difficult to use, please contact the manufacturer immediately, which will provide you necessary assistance or call NAYATI dealer.
- ! Please check the appliance periodically for 6 months. Contact your dealer that will supply assistance to repair and set interval.
- ! Authorized and qualified personnel must do all service.

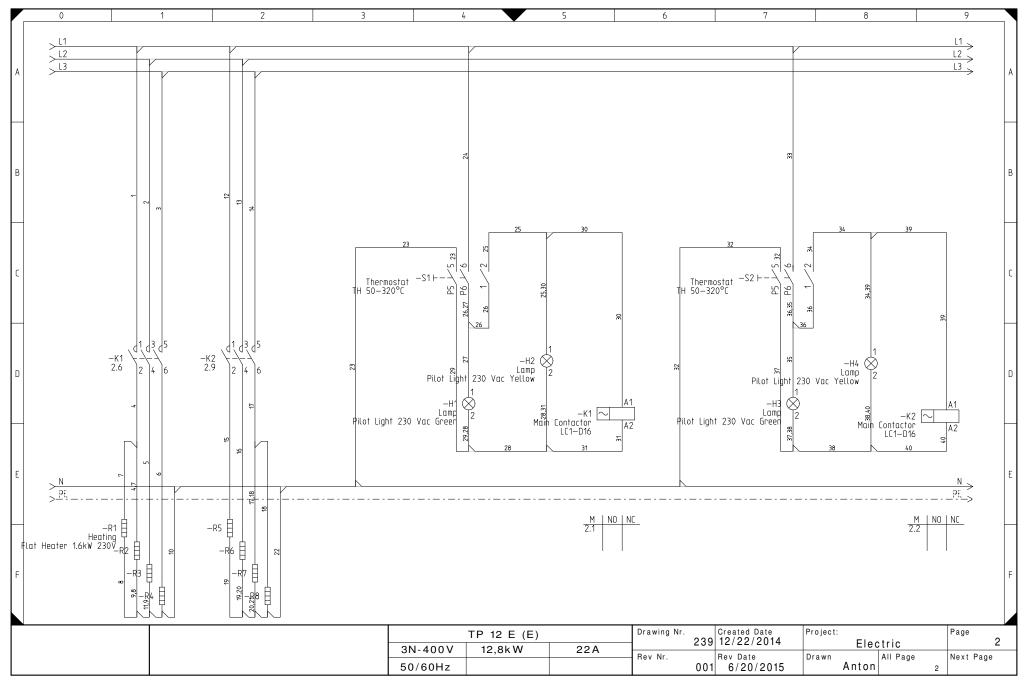
### Trouble Shooting

### Trouble Shooting



NO.	PROBLEM	CAUSE	CORRECTIVE ACTION
1.	Thermostat does not	Thermostat damaged	Check and replace. Check
	function		Thermostat when adjusting
			temperature, Pin 1 and 2 must
			connected.
2.	Thermostat with ON /	ON / OFF switch damaged	Check and replace. Check
	OFF switch does not		Thermostat when turned ON, Pin 5
	function		and P5 must be connected. Pin 6
			and P6 must be connected.
3.	Pilot lamp does not	Pilot lamp damaged	Check and replace
		No electric current between	Check and repair
		Thermostat and Pilot lamp	
4.	Heating element does	Heating element damaged	Check and replace
	not function	No electric current between	Check and repair
		heating element,	
		Thermostat, and Pilot lamp	
5.	Griddle's temperature	Heating element damaged	Check and replace
	cannot raise / heat up	No electric current between	Check and repair
		heating element,	
		Thermostat, and Pilot lamp	
6.	Contactor does not	Coil damaged	Check and replace
	function	Contactor damaged	Check and replace
7.	Griddle leaves Black	Cleaning not done properly	Repair re-season if possible
	Particle	Griddle are unused for a	otherwise replace griddle
		long time and exposed to	
		oxidation	





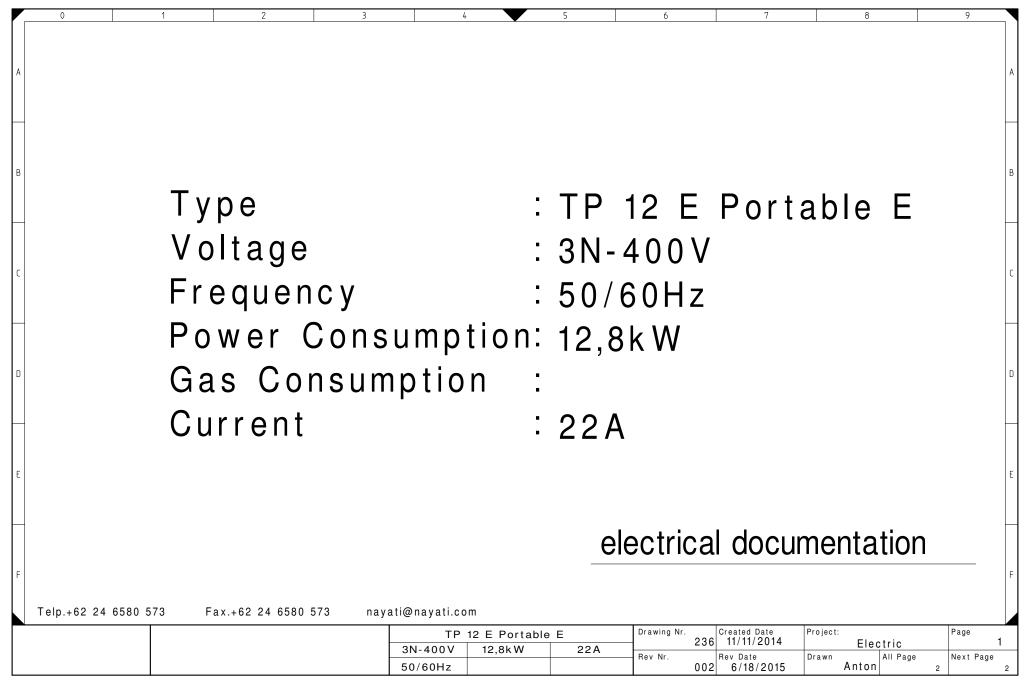
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Sheet	Kind of Document	Description							Revisio	n date
1	L of Documents								6/20/201	15
1	Circuit diagrams								5/22/201	14
2	Circuit diagrams								12/20/20	)14
1	L of Products									
1	L of Wires									
2	L of Wires									
1	L of Parts									
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			50/60Hz			Hev Nr.	001 Rev Date 6/20/2015	Anton	Page I	Next Pag

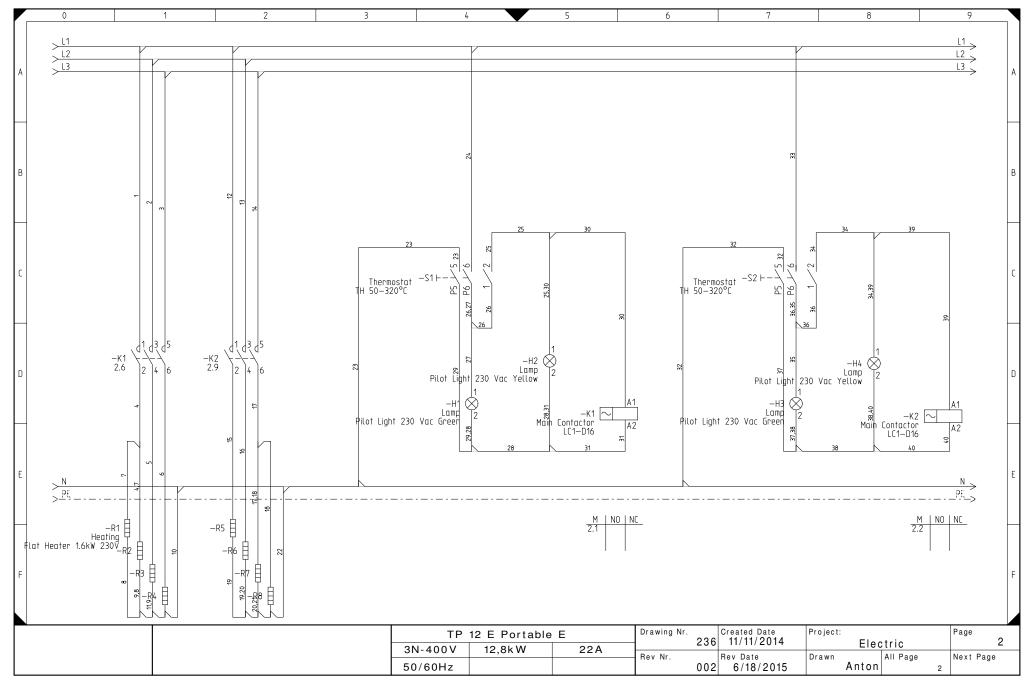
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Product	Туре	Description	Manufacture	Document type	Sheet	Path
-R1	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R2	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R3	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R4	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R5	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-R6	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-R7	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-R8	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-H1	Pilot Light 230 Vac Green	Lamp		Circuit diagrams	2	4
-S1	TH 50-320°C	Thermostat	E.G.O	Circuit diagrams	2	4
-H2	Pilot Light 230 Vac Yellow	Lamp		Circuit diagrams	2	5
-K1	LC1-D16	Main Contactor	Schneider	Circuit diagrams	2	6
-H3	Pilot Light 230 Vac Green	Lamp		Circuit diagrams	2	7
-S2	TH 50-320°C	Thermostat	E.G.O	Circuit diagrams	2	7
-H4	Pilot Light 230 Vac Yellow	Lamp		Circuit diagrams	2	8
-K2	LC1-D16	Main Contactor	Schneider	Circuit diagrams	2	9
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		List of	Conne	ctions				
From	То				Туре	No.	Colour	Square
-K1:1	L1				Heat Resistant	1	RD	2,5
-K1:3	L2				Heat Resistant	2	RD	2,5
−K1:5	L3				Heat Resistant	3	RD	2,5
-K1:2	-R2:1				Heat Resistant	4	BK	2,5
-K1:4	−R3:1				Heat Resistant	5	BK	2,5
-K1:6	-R4:1				Heat Resistant	6	BK	2,5
−R2:1	-R1:1				Heat Resistant	7	BK	2,5
-R2:2	-R1:2				Heat Resistant	8	BU	2,5
-R3:2	-R2:2				Heat Resistant	9	BU	2,5
-R4:2	N				Heat Resistant	10	BU	2,5
-R4:2	-R3:2				Heat Resistant	11	BU	2,5
-K2:1	L1				Heat Resistant	12	RD	2,5
-K2:3	L2				Heat Resistant	13	RD	2,5
-K2:5	L3				Heat Resistant	14	RD	2,5
-K2:2	-R5:1				Heat Resistant	15	BK	2,5
-K2:4	-R6:1				Heat Resistant	16	BK	2,5
-K2:6	-R7:1				Heat Resistant	17	BK	2,5
−R7:1	-R8:1				Heat Resistant	18	BK	2,5
-R6:2	-R5:2				Heat Resistant	19	BU	2,5
-R7:2	-R6:2				Heat Resistant	20	BU	2,5
-R7:2	-R8:2				Heat Resistant	21	BU	2,5
-R8:2	N				Heat Resistant	22	BU	2,5
−S1:5	N				Heat Resistant	23	BU	2,5
-S1:6	L1				Heat Resistant	24	RD	2,5
-S1:2	-H2:1				Heat Resistant	25	RD	1,5
-S1:P6	-S1:1				Heat Resistant	26	RD	1,5
-S1:P6	-H1:1				Heat Resistant	27	RD	1,5
-H1:2	-H2:2				Heat Resistant	28	BU	1,5
-H1:2	-S1:P5				Heat Resistant	29	BU	1,5
-K1:A1	-H2:1				Heat Resistant	30	RD	1,5
			12 E (E) 2,8kW	22A	Drawing Nr. 239 Created Date 12/22/2014  Rev Nr. Rev Date	Project: Ele	CtriC All Page	Page 1
		50/60Hz			001 6/20/2015	Anton	All Page 2	Next Page 2

		List	of Conne	ections					
From	То				Туре		No.	Colour	Square
-K1:A2	-H2:2				Heat Resistant		31	BU	1,5
-S2:5	N				Heat Resistant		32	BU	2,5
-S2:6	L1				Heat Resistant		33	RD	2,5
-S2:2	-H4:1				Heat Resistant		34	RD	1,5
-S2:P6	-H3:1				Heat Resistant		35	RD	1,5
-S2:P6	-S2:1				Heat Resistant		36	RD	1,5
-H3:2	-S2:P5				Heat Resistant		37	BU	1,5
-H3:2	-H4:2				Heat Resistant		38	BU	1,5
-K2:A1	-H4:1				Heat Resistant		39	RD	1,5
-K2:A2	-H4:2				Heat Resistant		40	BU	1,5
	I		TP 12 E (E)		Drawing Nr. Creat	ted Date	Project:		Page
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			L	ist of Pa	arts				
Total	Туре	Description		Volt	Ampere	Watt	Contact miror	Manufacture	Stock Nr
8	Flat Heater 1.6kW 230V	Flat Heater 1.6kW 230V (T6.14	.E02B)	230		1600			PD.411SB
2	LC1-D16	Magnetic Contactor 16A		230	16			Schneider	KB.5033A
2	Pilot Light 230 Vac Green	Pilot Light 230 V Green (3468	182)	230					PD.414KB-1
2	Pilot Light 230 Vac Yellow	Pilot Light Yellow 230 V		230					PD.414JB-1
2	TH 50-320°C	Thermostat w/ Switch On/Off	50-320 C		16			E.G.0	PD.412C
			3N-400V	TP 12 E (E) 12,8kW	22A	Drawing Nr. 23	39 12/22/2014	Project: Electric	Page
			50/60Hz	12,0K VV	22A	Rev Nr.	Rev Date 01 6/20/2015	Drawn All Page Anton	Next Page





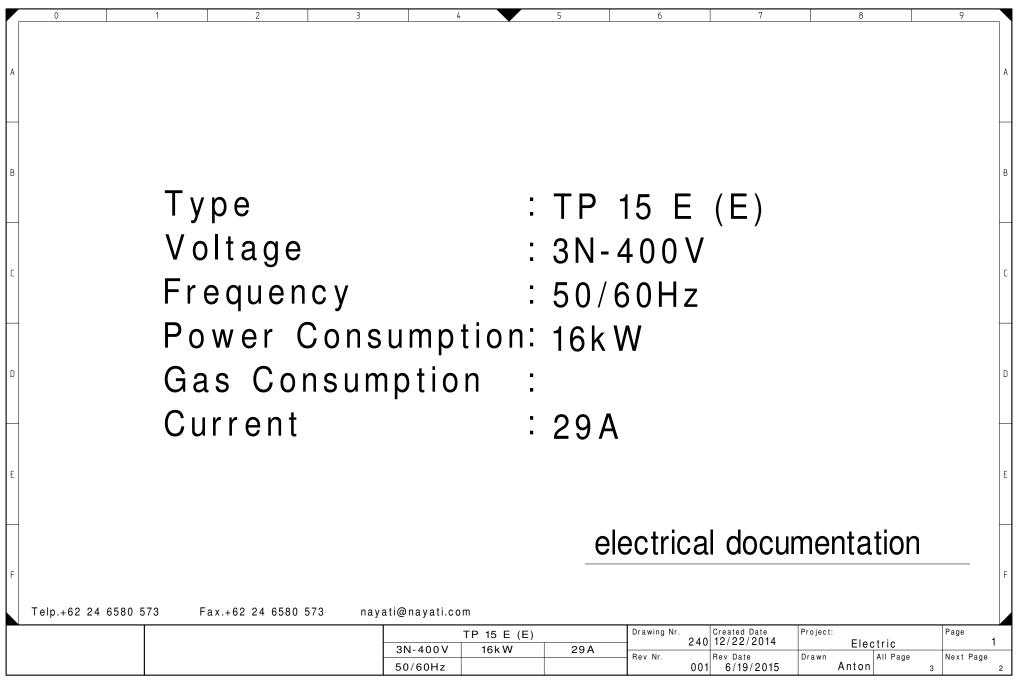
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Sheet	Kind of Document	Description									Revision	n date
1	L of Documents										6/18/20	15
1	Circuit diagrams										5/22/20	14
2	Circuit diagrams										12/20/2	014
1	L of Products											
1	L of Wires											
2	L of Wires											
1	L of Parts											
			ТР	12 E Portable	. F	Drawing Nr.	Created D	ate	Project:			Page
			3N-400V	12,8kW	22A	<u> </u>	236 Created D 11/11/2	1014		Electric		
			50/60Hz	,		Rev Nr.	002 Rev Date 6/18/	0045	Drawn	Anton All Pag	ge 1	Next Pag

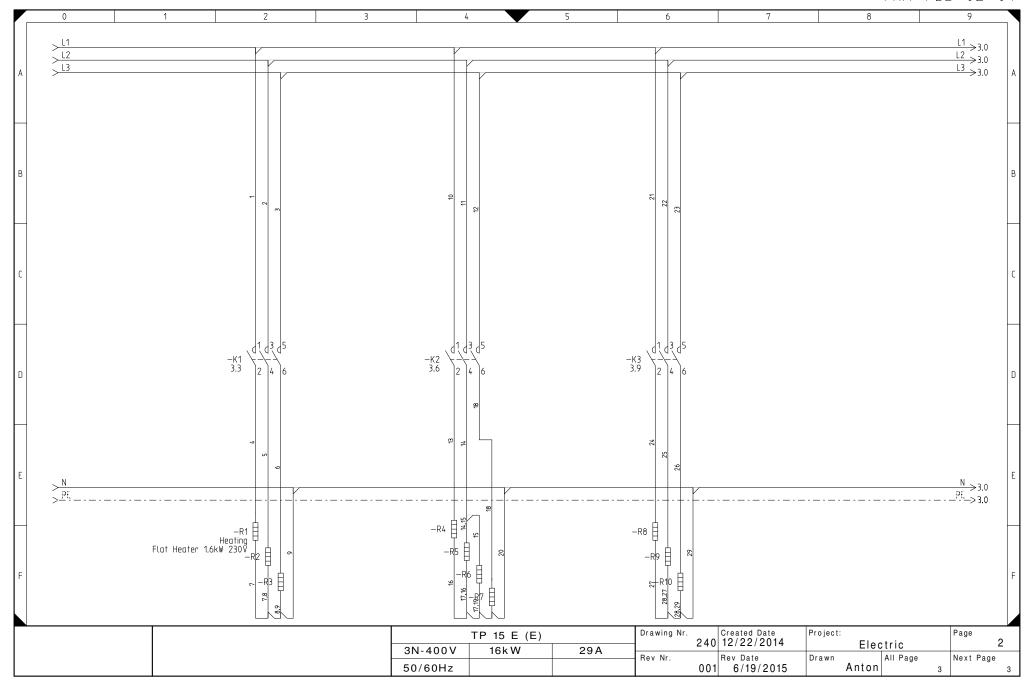
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Product	Туре	Description	Manufacture	Document type	Sheet	Path
-R1	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R2	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R3	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R4	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	1
-R5	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-R6	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-R7	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-R8	Flat Heater 1.6kW 230V	Heating		Circuit diagrams	2	2
-H1	Pilot Light 230 Vac Green	Lamp		Circuit diagrams	2	4
-S1	TH 50-320°C	Thermostat	E.G.0	Circuit diagrams	2	4
-H2	Pilot Light 230 Vac Yellow	Lamp		Circuit diagrams	2	5
-K1	LC1-D16	Main Contactor	Schneider	Circuit diagrams	2	6
-H3	Pilot Light 230 Vac Green	Lamp		Circuit diagrams	2	7
<b>-</b> S2	TH 50-320°C	Thermostat	E.G.0	Circuit diagrams	2	7
-H4	Pilot Light 230 Vac Yellow	Lamp		Circuit diagrams	2	8
-K2	LC1-D16	Main Contactor	Schneider	Circuit diagrams	2	9
		TP 12 E Portable E	Drawing Nr.   Created D   236   11/11/20	ate Project: )14 Electr		age
	-	3N-400V 12,8kW 22A 50/60Hz	Rev Nr. 002 Rev Date 6/18/	Drawn AI		ext Page

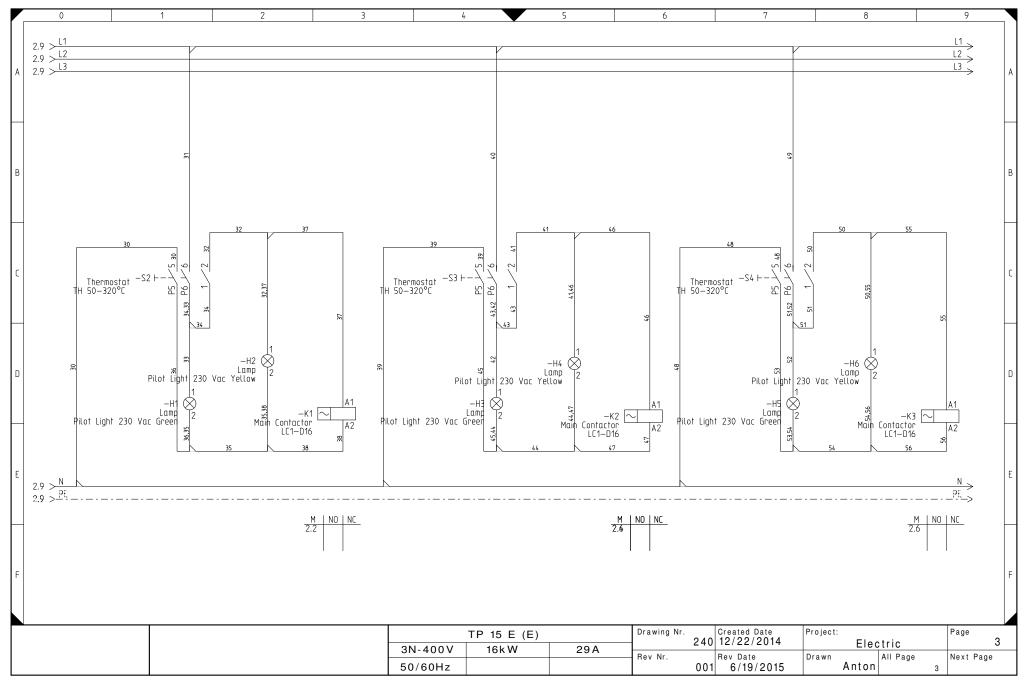
		List of Conn	ections				
From	То			Туре	No.	Colour	Square
-K1:1	L1			Heat Resistant	1	RD	2,5
-K1:3	L2			Heat Resistant	2	RD	2,5
-K1:5	L3			Heat Resistant	3	RD	2,5
-K1:2	-R2:1			Heat Resistant	4	BK	2,5
-K1:4	-R3:1			Heat Resistant	5	BK	2,5
-K1:6	-R4:1			Heat Resistant	6	BK	2,5
-R2:1	-R1:1			Heat Resistant	7	ВК	2,5
-R2:2	-R1:2			Heat Resistant	8	BU	2,5
-R3:2	-R2:2			Heat Resistant	9	BU	2,5
-R4:2	N			Heat Resistant	10	BU	2,5
-R4:2	-R3:2			Heat Resistant	11	BU	2,5
-K2:1	L1			Heat Resistant	12	RD	2,5
-K2:3	L2			Heat Resistant	13	RD	2,5
-K2:5	L3			Heat Resistant	14	RD	2,5
-K2:2	-R5:1			Heat Resistant	15	BK	2,5
-K2:4	-R6:1			Heat Resistant	16	ВК	2,5
-K2:6	-R7:1			Heat Resistant	17	ВК	2,5
-R7:1	-R8:1			Heat Resistant	18	ВК	2,5
-R6:2	-R5:2			Heat Resistant	19	BU	2,5
-R7:2	-R6:2			Heat Resistant	20	BU	2,5
-R7:2	-R8:2			Heat Resistant	21	BU	2,5
-R8:2	N			Heat Resistant	22	BU	2,5
-S1:5	N			Heat Resistant	23	BU	2,5
-S1:6	L1			Heat Resistant	24	RD	2,5
-S1:2	-H2:1			Heat Resistant	25	RD	1,5
-S1:P6	-S1:1		Heat Resistant	26	RD	1,5	
-S1:P6	-H1:1			Heat Resistant	27	RD	1,5
-H1:2	-H2:2			Heat Resistant	28	BU	1,5
-H1:2	-S1:P5			Heat Resistant	29	BU	1,5
-K1:A1	-H2:1			Heat Resistant	30	RD	1,5
	,	TP 12 E Portabl 3N-400V 12,8kW	e E 22A	Drawing Nr. 236 Created Date 11/11/2014		ctric	Page 1
		50/60Hz		Rev Nr. 002 Rev Date 6/18/2015	Drawn Anton	All Page 2	Next Page

		List	of Conn	ections				
From	То				Туре	No.	Colour	Square
-K1:A2	-H2:2				Heat Resistant	31	BU	1,5
-S2:5	N				Heat Resistant	32	BU	2,5
-S2:6	L1				Heat Resistant	33	RD	2,5
-S2:2	-H4:1				Heat Resistant	34	RD	1,5
-S2:P6	-H3:1				Heat Resistant	35	RD	1,5
-S2:P6	-S2:1				Heat Resistant	36	RD	1,5
-H3:2	-S2:P	5			Heat Resistant	37	BU	1,5
-H3:2	-H4:2				Heat Resistant	38	BU	1,5
-K2:A1	-H4:1				Heat Resistant	39	RD	1,5
-K2:A2	-H4:2				Heat Resistant	40	BU	1,5
			12 E Portable		Drawing Nr. 236 Created Date 11/11/2014	Project:	ctric	Page 2
		3N-400 V 50/60Hz	12,8kW	22A	Rev Nr. Rev Date 6/18/2015	Drawn Anton	All Page	Next Page

			L	ist of P	arts				
Total	Туре	Description		Volt	Ampere	Watt	Contact miror	Manufacture	Stock Nr
8	Flat Heater 1.6kW 230V	Flat Heater 1.6kW 230V (T6.14	4.E02B)	230		1600			PD.411SB
2	LC1-D16	Magnetic Contactor 16A		230	16			Schneider	KB.5033A
2	Pilot Light 230 Vac Green	Pilot Light 230 V Green (3468	382)	230					PD.414KB-1
2	Pilot Light 230 Vac Yellow	Pilot Light Yellow 230 V		230					PD.414JB-1
2	TH 50-320°C	Thermostat w/ Switch On/Off	50-320 C		16			E.G.0	PD.412C
			TP 3N-400V	12 E Portabl 12,8kW	e E 22A	Drawing Nr.	36 11/11/2014	Project: Electric Drawn All Page	Page
			50/60Hz	-		Rev Nr.	Rev Date 02 6/18/2015	Drawn All Page Anton	Next Page







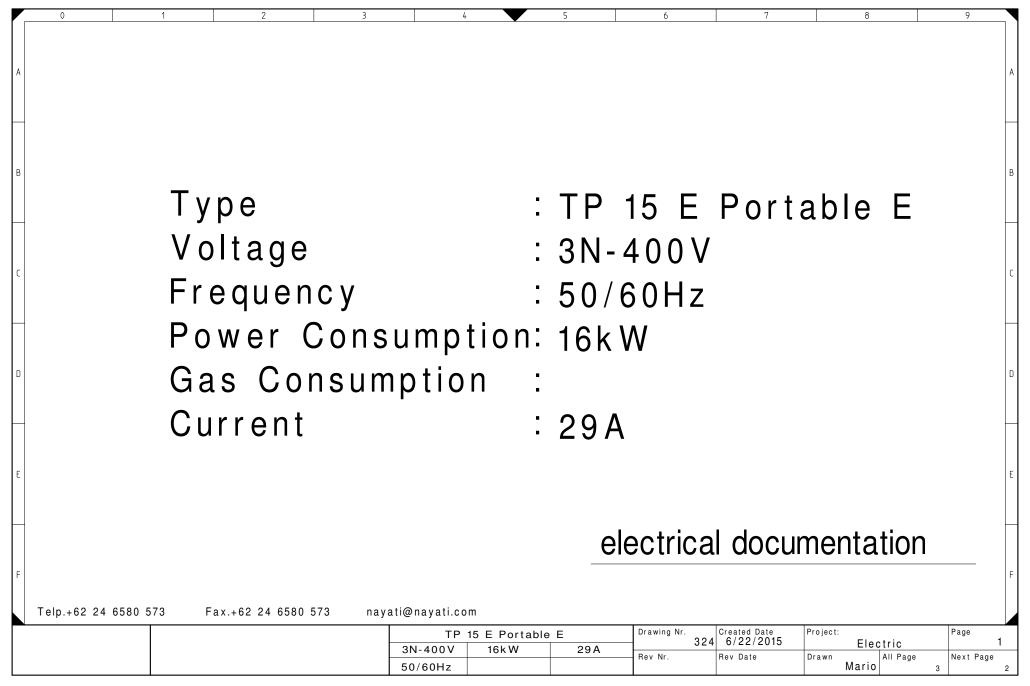
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1	Circuit diagrams								5/22/2014
2	Circuit diagrams								12/20/2014
3	Circuit diagrams								12/20/2014
1	L of Products								
1	L of Wires								
2	L of Wires								
1	L of Parts								
			T	TD 15 5 (5)		Drawing Nr.	Created Date	Project:	Page
			3N-400V	TP 15 E (E) 16kW	29 A	_	240 12/22/2014	Electi	ric
			50/60Hz	1010 44	237	— Rev Nr.	001 Rev Date 6/19/2015	Drawn Anton A	II Page Next Pag

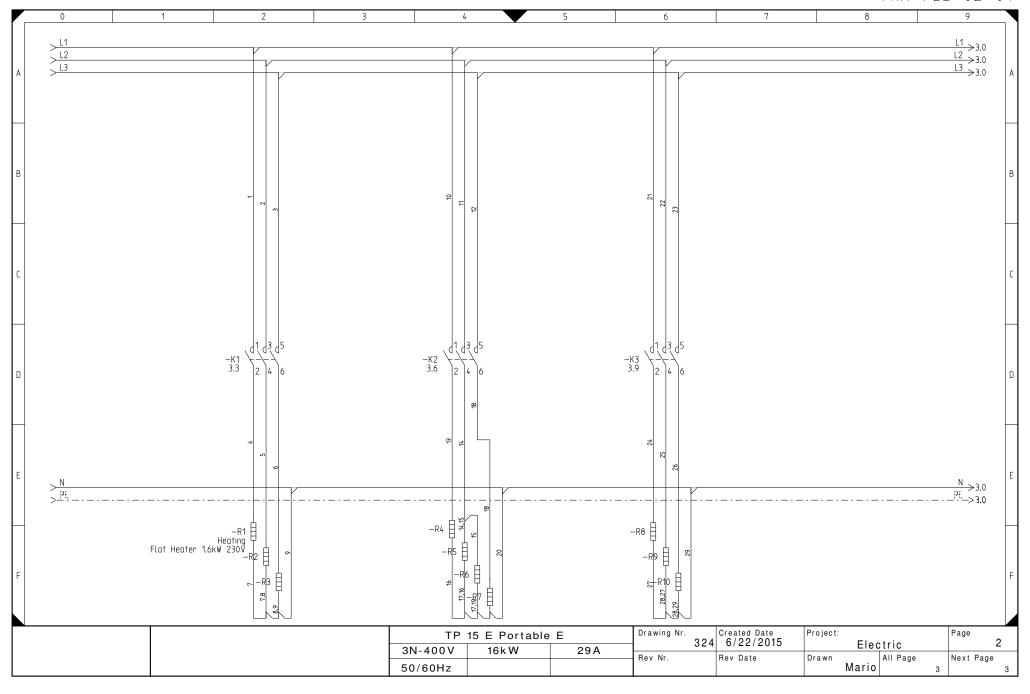
Product	Type		Description		Manufactur	e Document type	Sheet	Path
-R1	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	2
-R2	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	2
-R3	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	2
-R4	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	4
-R5	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	4
-R6	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	4
-R7	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	4
-R10	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	6
-R8	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	6
-R9	Flat Heater 1.6kW 230V	Heating				Circuit diagrams	2	6
-H1	Pilot Light 230 Vac Green	Lamp				Circuit diagrams	3	1
-S2	TH 50-320°C	Thermos	tat .		E.G.0	Circuit diagrams	3	1
-H2	Pilot Light 230 Vac Yellow	Lamp				Circuit diagrams	3	2
-K1	LC1-D16	Main Cor	tactor		Schneider	Circuit diagrams	3	3
-H3	Pilot Light 230 Vac Green	Lamp				Circuit diagrams	3	4
-23	TH 50-320°C	Thermos	tat .		E.G.0	Circuit diagrams	3	4
-H4	Pilot Light 230 Vac Yellow	Lamp				Circuit diagrams	3	5
-K2	LC1-D16	Main Cor	tactor		Schneider	Circuit diagrams	3	6
-H5	Pilot Light 230 Vac Green	Lamp				Circuit diagrams	3	7
-S4	TH 50-320°C	Thermos	tat .		E.G.0	Circuit diagrams	3	7
-H6	Pilot Light 230 Vac Yellow	Lamp				Circuit diagrams	3	8
-K3	LC1-D16	Main Cor	tactor		Schneider	Circuit diagrams	3	9
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			TP 15 E (E)		Drawing Nr. Cre	ited Date Project:		age
		3N-400\		29 A		22/2014 Elect		ext Pag

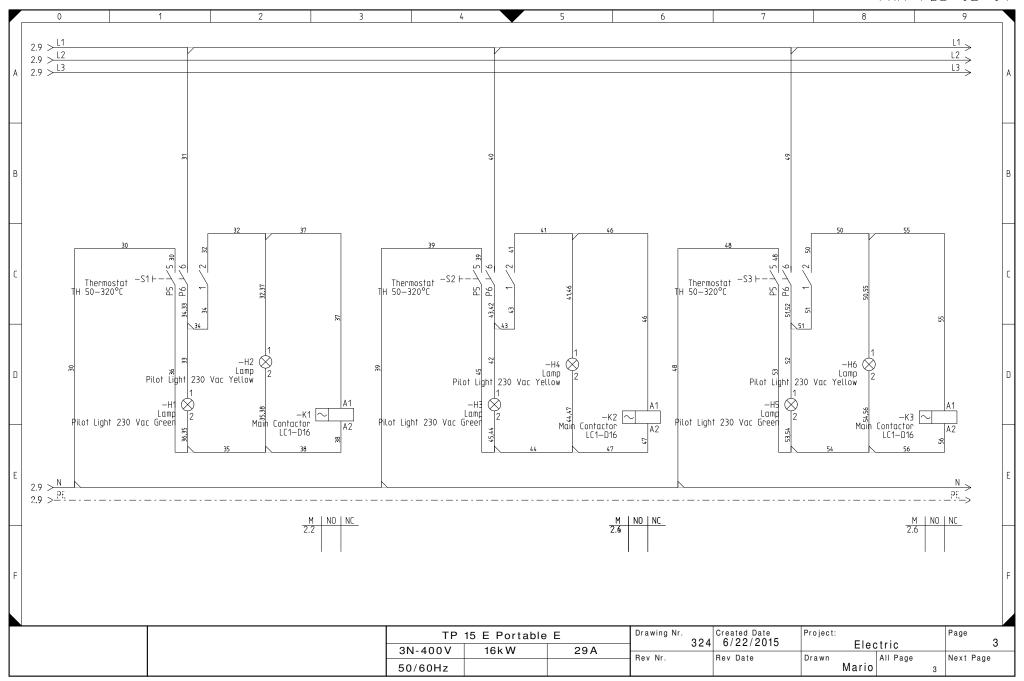
		List of Conne	ections				
From	То			Туре	No.	Colour	Square
-K1:1	L1			Heat Resistant	1	RD	2,5
-K1:3	L2			Heat Resistant	2	RD	2,5
-K1:5	L3			Heat Resistant	3	RD	2,5
-K1:2	-R1:1			Heat Resistant	4	ВК	2,5
-K1:4	-R2:1			Heat Resistant	5	ВК	2,5
-K1:6	-R3:1			Heat Resistant	6	ВК	2,5
-R2:2	-R1:2			Heat Resistant	7	BU	2,5
-R3:2	-R2:2			Heat Resistant	8	BU	2,5
-R3:2	N			Heat Resistant	9	BU	2,5
-K2:1	L1			Heat Resistant	10	RD	2,5
-K2:3	L2			Heat Resistant	11	RD	2,5
-K2:5	L3			Heat Resistant	12	RD	2,5
-K2:2	-R4:1			Heat Resistant	13	BK	2,5
-K2:4	-R5:1			Heat Resistant	14	BK	2,5
-R5:1	-R6:1			Heat Resistant	15	ВК	2,5
-R4:2	-R5:2			Heat Resistant	16	BU	2,5
-R5:2	-R6:2			Heat Resistant	17	BU	2,5
-R7:1	-K2:6			Heat Resistant	18	ВК	2,5
-R6:2	-R7:2			Heat Resistant	19	BU	2,5
-R7:2	N			Heat Resistant	20	BU	2,5
-K3:1	L1			Heat Resistant	21	RD	2,5
-K3:3	L2			Heat Resistant	22	RD	2,5
−K3:5	L3			Heat Resistant	23	RD	2,5
-K3:2	-R8:1			Heat Resistant	24	ВК	2,5
-K3:4	-R9:1			Heat Resistant	25	ВК	2,5
-K3:6	-R10:1			Heat Resistant	26	BK	2,5
-R8:2	-R9:2			Heat Resistant	27	BU	2,5
-R9:2	-R10:2			Heat Resistant	28	BU	2,5
-R10:2	N			Heat Resistant	29	BU	2,5
-\$2:5	N			Heat Resistant	30	BU	2,5
	·	TP 15 E (E)	29 A	Drawing Nr. 240 Created Date 12/22/2014		ctric	Page 1
		50/60Hz		Rev Nr. 001 Rev Date 6/19/2015	Anton	All Page 2	Next Page 2

	List of	Connections			
From	То	Туре	No.	Colour	Square
-S2:6	L1	Heat Resistant	31	RD	2,5
-S2:2	-H2:1	Heat Resistant	32	RD	1,5
-S2:P6	-H1:1	Heat Resistant	33	RD	1,5
-S2:P6	-S2:1	Heat Resistant	34	RD	1,5
-H1:2	-H2:2	Heat Resistant	35	BU	1,5
-H1:2	-S2:P5	Heat Resistant	36	BU	1,5
-K1:A1	-H2:1	Heat Resistant	37	RD	1,5
-K1:A2	-H2:2	Heat Resistant	38	BU	1,5
<b>-</b> S3:5	N	Heat Resistant	39	BU	2,5
-S3:6	L1	Heat Resistant	40	RD	2,5
-\$3:2	-H4:1	Heat Resistant	41	RD	1,5
-S3:P6	-H3:1	Heat Resistant	42	RD	1,5
-S3:P6	-S3:1	Heat Resistant	43	RD	1,5
-H3:2	-H4:2	Heat Resistant	44	BU	1,5
-H3:2	-S3:P5	Heat Resistant	45	BU	1,5
-K2:A1	-H4:1	Heat Resistant	46	RD	1,5
-K2:A2	-H4:2	Heat Resistant	47	BU	1,5
-\$4:5	N	Heat Resistant	48	BU	2,5
-\$4:6	L1	Heat Resistant	49	RD	2,5
-\$4:2	-H6:1	Heat Resistant	50	RD	1,5
-S4:P6	-S4:1	Heat Resistant	51	RD	1,5
-S4:P6	-H5:1	Heat Resistant	52	RD	1,5
-H5:2	-S4:P5	Heat Resistant	53	BU	1,5
-H5:2	-H6:2	Heat Resistant	54	BU	1,5
-K3:A1	-H6:1	Heat Resistant	55	RD	1,5
-K3:A2	-H6:2	Heat Resistant	56	BU	1,5
		15 E (E) Drawing Nr. 240 12/22/2	ate Project: Ele	ectric	Page 2
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			L	ist of Pa	arts				
Total	Туре	Description		Volt	Ampere	Watt	Contact miror	Manufacture	Stock Nr
10	Flat Heater 1.6kW 230V	Flat Heater 1.6kW 230V (T6.14	.E02B)	230		1600			PD.411SB
3	LC1-D16	Magnetic Contactor 16A		230	16			Schneider	KB.5033A
3	Pilot Light 230 Vac Green	Pilot Light 230 V Green (3468	82)	230					PD.414KB-1
3	Pilot Light 230 Vac Yellow	Pilot Light Yellow 230 V		230					PD.414JB-1
3	TH 50-320°C	Thermostat w/ Switch On/Off	50-320 C		16			E.G.0	PD.412C
			3N-400V	TP 15 E (E) 16kW	29 A	Drawing Nr. 24 Rev Nr.	0 12/22/2014	Project: Electric Drawn All Page	Page Next Page
			50/60Hz			They Mr.	Rev Date 01 6/19/2015	Anton All Page	1 Next Page







			List	of Docu	ments				
Sheet	Kind of Document	Description							Revision date
1	L of Documents								6/22/2015
1	Circuit diagrams								5/22/2014
2	Circuit diagrams								12/20/2014
3	Circuit diagrams								12/20/2014
1	L of Products								
1	L of Wires								
2	L of Wires								
1	L of Parts								
			1			I Barrella V	0	Destant	
			3N-400V	15 E Portable		Drawing Nr.	4 6/22/2015	Project: Electric	Page
			3N-400V 50/60Hz	16 k W	29 A	Rev Nr.	Rev Date	Drawn Mario All P	age Next Pag

		LI	st of Prod	Jucis					
Product	Туре		Description		Manufa	cture	Document type	Sheet	Patl
-R1	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	2
-R2	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	2
-R3	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	2
-R4	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	4
-R5	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	4
-R6	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	4
-R7	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	4
-R10	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	6
-R8	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	6
-R9	Flat Heater 1.6kW 230V	Heating					Circuit diagrams	2	6
-H1	Pilot Light 230 Vac Green	Lamp					Circuit diagrams	3	1
-\$1	TH 50−320°C	Thermosta	t		E.G.0		Circuit diagrams	3	1
-H2	Pilot Light 230 Vac Yellow	Lamp					Circuit diagrams	3	2
-K1	LC1—D16	Main Conto	ıctor		Schneider		Circuit diagrams	3	3
-H3	Pilot Light 230 Vac Green	Lamp					Circuit diagrams	3	4
-\$2	TH 50-320°C	Thermosta	t		E.G.0		Circuit diagrams	3	4
-H4	Pilot Light 230 Vac Yellow	Lamp					Circuit diagrams	3	5
-K2	LC1-D16	Main Conto	ıctor		Schneider		Circuit diagrams	3	6
−H5	Pilot Light 230 Vac Green	Lamp					Circuit diagrams	3	7
-53	TH 50-320°C	Thermosta	t		E.G.0		Circuit diagrams	3	7
-H6	Pilot Light 230 Vac Yellow	Lamp					Circuit diagrams	3	8
	LC1-D16	Main Conto	ıctor		Schneider		Circuit diagrams	3	9
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		3N-400V	16kW	29 A	324	6/22/2015	Electr		ext Pag

		List	of Conn	ections				
From	То				Туре	No.	Colour	Square
-K1:1	L1				Heat Resistant	1	RD	2,5
-K1:3	L2				Heat Resistant	2	RD	2,5
-K1:5	L3				Heat Resistant	3	RD	2,5
-K1:2	-R1:1				Heat Resistant	4	ВК	2,5
-K1:4	-R2:1				Heat Resistant	5	BK	2,5
-K1:6	-R3:1				Heat Resistant	6	ВК	2,5
-R2:2	-R1:2				Heat Resistant	7	BU	2,5
-R3:2	-R2:2				Heat Resistant	8	BU	2,5
-R3:2	N				Heat Resistant	9	BU	2,5
-K2:1	L1				Heat Resistant	10	RD	2,5
-K2:3	L2				Heat Resistant	11	RD	2,5
-K2:5	L3				Heat Resistant	12	RD	2,5
-K2:2	-R4:1				Heat Resistant	13	BK	2,5
-K2:4	-R5:1				Heat Resistant	14	ВК	2,5
-R5:1	-R6:1				Heat Resistant	15	ВК	2,5
-R4:2	-R5:2				Heat Resistant	16	BU	2,5
-R5:2	-R6:2				Heat Resistant	17	BU	2,5
-R7:1	-K2:6				Heat Resistant	18	BK	2,5
-R6:2	-R7:2				Heat Resistant	19	BU	2,5
-R7:2	N				Heat Resistant	20	BU	2,5
-K3:1	L1				Heat Resistant	21	RD	2,5
-K3:3	L2				Heat Resistant	22	RD	2,5
-K3:5	L3				Heat Resistant	23	RD	2,5
-K3:2	-R8:1				Heat Resistant	24	BK	2,5
-K3:4	-R9:1				Heat Resistant	25	ВК	2,5
-K3:6	-R10:1				Heat Resistant	26	BK	2,5
-R8:2	-R9:2				Heat Resistant	27	BU	2,5
-R9:2	-R10:2				Heat Resistant	28	BU	2,5
-R10:2	N				Heat Resistant	29	BU	2,5
-S1:5	N				Heat Resistant	30	BU	2,5
	1		5 E Portable	_	Drawing Nr. 324 Created Date 6/22/2015	Project:	ectric	Page 1
		3N-400V 50/60Hz	16k W	29 A	Rev Nr. Rev Date	Drawn Mario	All Page	Next Page

		List of	Connec	tions				
From	То				Туре	No.	Colour	Square
-S1:6	L1				Heat Resistant	31	RD	2,5
-S1:2	-H2:1				Heat Resistant	32	RD	1,5
-S1:P6	-H1:1				Heat Resistant	33	RD	1,5
-S1:P6	-S1:1				Heat Resistant	34	RD	1,5
-H1:2	-H2:2				Heat Resistant	35	BU	1,5
-H1:2	-S1:P5				Heat Resistant	36	BU	1,5
-K1:A1	-H2:1				Heat Resistant	37	RD	1,5
-K1:A2	-H2:2				Heat Resistant	38	BU	1,5
-S2:5	N				Heat Resistant	39	BU	2,5
-S2:6	L1				Heat Resistant	40	RD	2,5
-S2:2	-H4:1				Heat Resistant	41	RD	1,5
-S2:P6	-H3:1				Heat Resistant	42	RD	1,5
-S2:P6	-S2:1				Heat Resistant	43	RD	1,5
-H3:2	-H4:2				Heat Resistant	44	BU	1,5
-H3:2	-S2:P5				Heat Resistant	45	BU	1,5
-K2:A1	-H4:1				Heat Resistant	46	RD	1,5
-K2:A2	-H4:2				Heat Resistant	47	BU	1,5
-S3:5	N				Heat Resistant	48	BU	2,5
<b>-</b> \$3:6	L1				Heat Resistant	49	RD	2,5
-S3:2	-H6:1				Heat Resistant	50	RD	1,5
-S3:P6	-S3:1				Heat Resistant	51	RD	1,5
-S3:P6	-H5:1				Heat Resistant	52	RD	1,5
-H5:2	-S3:P5				Heat Resistant	53	BU	1,5
-H5:2	-H6:2				Heat Resistant	54	BU	1,5
-K3:A1	-H6:1				Heat Resistant	55	RD	1,5
-K3:A2	-H6:2				Heat Resistant	56	BU	1,5
			Portable E	29 A	Drawing Nr. 324 Created Date 6/22/2015		ctric	Page 2
		50/60Hz		2071	Rev Nr. Rev Date	Drawn Mario	All Page 2	Next Page

			L	ist of P	arts				
Total	Туре	Description		Volt	Ampere	Watt	Contact miror	Manufacture	Stock Nr
10	Flat Heater 1.6kW 230V	Flat Heater 1.6kW 230V (T6.14	.E02B)	230		1600			PD.411SB
3	LC1-D16	Magnetic Contactor 16A		230	16			Schneider	KB.5033A
3	Pilot Light 230 Vac Green	Pilot Light 230 V Green (3468	82)	230					PD.414KB-1
3	Pilot Light 230 Vac Yellow	Pilot Light Yellow 230 V		230					PD.414 JB-1
3	TH 50-320°C	Thermostat w/ Switch On/Off	50-320 C		16			E.G.0	PD.412C
			TP -	15 E Portabl	e E 29 A		4 6/22/2015	Project: Electric	Page
			50/60Hz			Rev Nr.	Rev Date	Drawn All Page Mario	Next Page