metos

ELECTRIC BAIN MARIE

700 Restaurant Serie

TYPE: 72/02CBE, 72/02TCBE, 74/02CBE, 74/02TCBE

Installation and Operation Manual

S/N: Rev.: 1.0

Dear Customer,

Congratulations on deciding to choose a Metos appliance for your kitchen activities. You made an excellent choice. We will do our best to make you a satisfied Metos customer like thousands of customers we have around the world.

Please read this manual carefully. You will learn correct, safe and efficient working methods in order to get the best possible benefit from the appliance. The instructions and hints in this manual will give you a quick and easy start, and you will soon note how nice it is to use the Metos equipment.

You will find the main technical data on the rating plate fixed to the equipment. When you need service or technical help, please let us know the serial number shown on the rating plate. This will make it easier to provide you with correct service.

For your convenience, space is provided below for you to record your local Metos service contact information.

METOS TEAM

Metos service phone number:.....

Contact person:.....

1. General information

Read the instructions in this manual carefully, as they contain important information on how to install, use and service the appliance properly, effectively, and in a safe manner.

Keep this manual in a safe place for future reference by other operators of the appliance.

This appliance should be installed following the instructions provided by the manufacturer and in compliance with all applicable local regulations. This appliance should be connected to the power, water, and gas supply by qualified personnel only.

All personnel in charge of using this appliance should be specifically trained in its operation.

In the event of failure or malfunction, switch off the appliance. The periodic functional checks requested in this manual should be carried out according to the instructions. Have the appliance serviced by a technically qualified person duly authorized by the manufacturer that uses genuine spare parts.

Failure to comply with the above may jeopardise the appliance's safety.

1.1 Symbols used in the manual

This symbol informs about a situation where a safety risk could be imminent. The instructions provided are mandatory in order to prevent injury.

This symbol informs about the right way to act in order to prevent bad results, damage to the appliance, or hazardous situations.

This symbol informs about tips and hints that help the user to get the best possible performance out of the appliance.

This symbol informs about a function that should be taken into account for self-control purposes.

1.2 Symbols used on the appliance

This symbol on a part warns the user that there are electrical terminals behind it. Therefore, the concerned part should only be removed by qualified personnel.

1.3 Checking correspondence between the appliance and the manual

The rating plate of the appliance shows its serial number. If you have lost the original user's manual, you can order a new one from the manufacturer or local representative. When ordering new manuals, it is essential to quote the serial number shown on the rating plate.

2. Safety

2.1 Using the appliance safely

Being an appliance designed only for professional use, it should be operated by qualified personnel exclusively. Never leave the appliance unattended while it is on.

Do not move the appliance while hot.

Do not use the appliance if the tank is empty.

Keep the tank drain outlet closed.

2.2 Safety instructions in case of malfunction

If the appliance will remain idle for some time or in the event of a failure, abnormal operation, etc., disconnect it from power supply. Call the service.

2.3 Disposing of the appliance

This appliance has been manufactured using recyclable raw materials and does not contain any hazardous or toxic substances. When disposing of the appliance and all its packing materials, ensure strict compliance with all applicable regulations in force in the installation location. Packing materials should be separated by type and subsequently delivered to specific collection sites. Ensure compliance with environmental protection regulations.

3. Functional description

3.1 Intended application of the appliance

The bain-marie is intended for holding products. The products will stay hot and keep heat better if they are put in containers provided with lids. We also recommend using GN containers to make full use of the basin volume.

3.1.1 Prohibited use

The bain-marie is not designed for heating up products.

3.2 Construction

Stainless steel bearing structure resting on four height-adjustable feet. Outer covering and worktop are all stainless steel (AISI 304).

The tank is stainless steel as well.

3.3 Operating principle

Heating is obtained by means of sheathed heating elements installed outside the tank and capable of withstanding mechanical and thermal stress.

Water temperature may be set to any position between 30°C (86°F) and 90°C (194°F).

3.3.1 Operating switches and indicator lights

By turning the thermostat knob clockwise, the power indicator light (item 3 in Fig. 1) will light up. The power indicator light (item 3) will remain on until the knob is turned back to 0.

The indicator light (item 2) lights up when temperature is within the operating range of the thermostat and turns off when temperature reaches the set value.

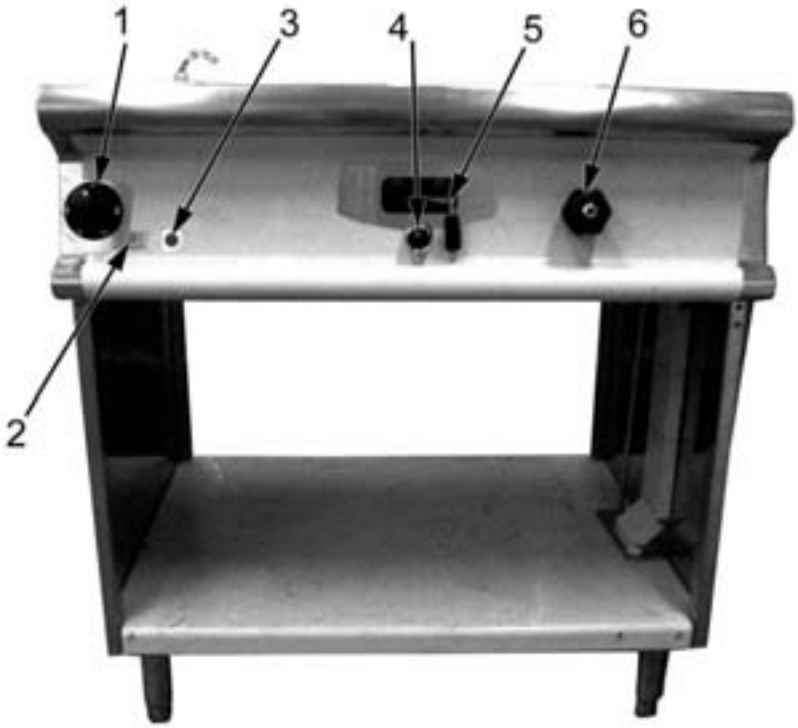
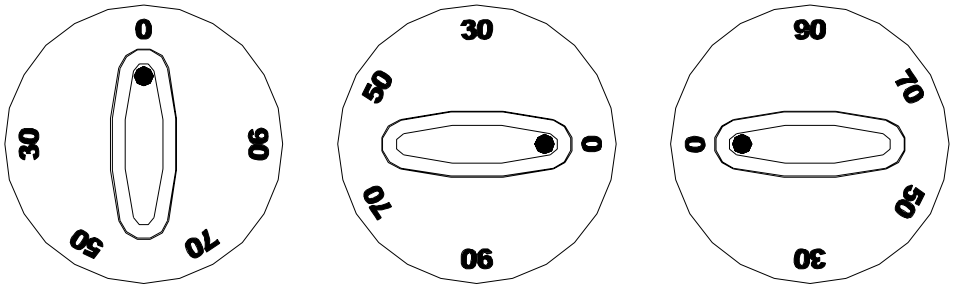


Fig. 1

1. Thermostat knob
2. Operation indicator light
3. Power indicator light
4. Tank drain
5. Drain valve opening lever
6. Water tap



7 8 9

Fig. 2

7. "OFF" position
8. 30°C (86°F) position (lowest temperature)
9. 90°C (194°F) position (highest temperature)

4. Operating instructions

4.1 Before using the appliance

4.1.1 Preparing the appliance for use

Remove all packing materials and adhesive films from the appliance very thoroughly. Remove the protective plastic film from the panels, and exercise great care to ensure that no glue traces are left on the steel surface; if necessary, use non-flammable solvents to remove glue traces. Clean the tank using hot water and a sponge.

Prior to cooking for the first time, we recommend that you clean the appliance, and especially the tank, very thoroughly using hot water and a sponge.

Before cleaning any stainless steel parts, make sure that the detergent you intend to use does not contain any abrasive substances and that it is suitable for stainless steel surfaces.

After cleaning the appliance, rinse it with clean water and wipe it dry with a clean cloth.

Before you warm the appliance up for the first time, fill the tank with water up to the maximum level mark. Remember to close the drain valve.

Never place the appliance under a jet of water to clean it!

4.2 Using the appliance

4.2.1 Filling the tank

First of all, check that the drain valve is closed (item 21 in Fig. 3),

Open the water tap (item 22) and fill the tank with water up to the maximum level mark shown on the tank.

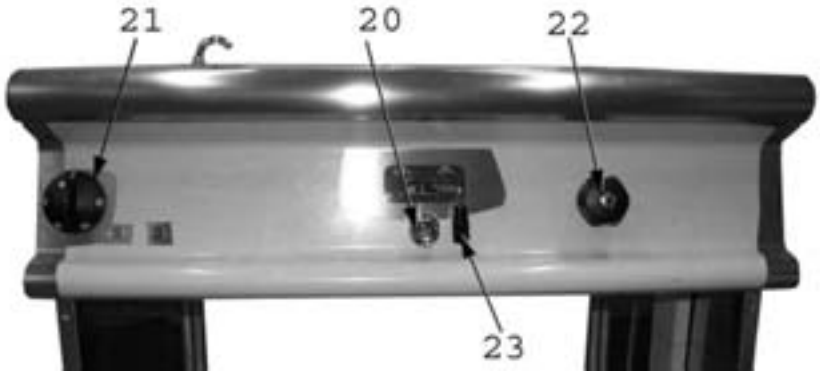


Fig. 3

20. Tank drain
21. Thermostat knob
22. Water tap
23. Drain valve opening lever

4.2.2 Turning on the appliance

- Energize the appliance by turning on the safety switch installed externally;
- By turning the thermostat knob clockwise, the power indicator light (item 3 in Fig. 1) will light up to indicate that the appliance is energized;
- By turning the thermostat knob further on, water will start heating. Such heating is provided by sheathed heating elements installed outside the tank and capable of withstanding mechanical and thermal stress. Whenever heating is on, an operation indicator light (item 2 in Fig. 1) also lights up.
- Water temperature may be set to any position between 30°C (86°F) and 90°C (194°F) (Fig. 2).

4.2.3 Daily cleaning

At the end of the working day, drain the tank as explained in paragraph "Emptying the tank", clean it thoroughly and remove any residues or incrustations that may have formed.

Rinse the tank with clean water and dry it.

4.2.4 Emptying the tank

The utmost attention should be given to this operation, which should be carried out only after water has cooled down.

1. Insert the drain pipe (item 30 in Fig. 5) and turn it until it remains in a vertical position.
2. Place a container suitable to hold all the water in the tank under the pipe.
3. Pull the opening lever (item 31) to the left until the drain valve opens.

Fig. 5

30. Drain pipe
31. Drain valve opening lever

4.3 After-use care

4.3.1 Daily cleaning

Before cleaning, turn off the appliance and disconnect power supply using the safety switch located upstream of the appliance.

Wait until the bain-marie has cooled down before you start cleaning it.

Drain all water from the tank; refer to chapter "Emptying the tank" further above.

General information

The main causes for stainless steel wear or corrosion are:

- using abrasive or acid detergents, especially chlorine-based products such as hydrochloric acid or sodium hypochlorite (bleach). Therefore, before buying a cleaning product, make sure it does not corrode steel;
- stagnation of ferrous deposits (such as those created by rust dissolved in the water flowing through the piping, especially after the appliance has remained idle for some time). Therefore, avoid such stagnation; in addition, avoid using wire scourers to remove the most stubborn food residues. Use, rather, scourers or spatulas made of stainless steel or softer, non-ferrous materials;
- stagnation of substances having acid components such as vinegar, lemon juice, sauces, salt, etc. Therefore, avoid prolonged contact of the stainless steel parts of the appliance with those substances. The evaporation of saline solutions over the surfaces of the appliance is particularly harmful to them.

Routine cleaning

Cleaning the appliance thoroughly on a daily basis is the key to keeping it in perfect working condition and prolonging its life. Clean the appliance with a damp cloth using water and soap or detergents, provided that they are not acid or abrasive as discussed further above. Such detergents should not even be used to wash the floor near the appliance, as their fumes may deposit on the steel surfaces and damage them. If the appliance is very dirty, use a synthetic Scotch BriteTM type sponge. Rinse it off with clean water and wipe it dry with a clean cloth. Do not rub the appliance with wire scourers as they could leave rust stains. For the same reason, avoid touching the appliance with ferrous objects.

In order to prevent corrosion spots from forming, ensure that any salt residues are carefully removed from the tank's sides and bottom.

Never use direct water jets to clean the appliance because this could result in water entering into it and damaging it.

Stains and abrasions on the steel surface

Scratches and dark stains may be smoothed or removed using stainless steel scourers or synthetic abrasive sponges, which should always be rubbed in the same direction as the satin finish.

Rust

If you need to remove rust stains, contact manufacturers of industrial detergents to find a suitable product. Industrial descaling products can also be used to that end. After using the descaler and rinsing off the appliance with clean water, an alkaline detergent may be required to neutralize any acid compounds left on the surface.

Cleaning the bain-marie

Occasionally, use a specific descaling product to remove any scale or incrustations that may have built up, as explained below:

Do not breathe the vapours produced during this operation. Wear a safety mask and rubber gloves.

4.3.2 Idle period

Turn off the safety switch fitted outside the appliance to shut off power supply to it.

4.3.3 Routine maintenance

Only qualified personnel are allowed to carry out service and maintenance operations.

The following maintenance operation should be carried out at least once a year:

- checking for proper operation of all control and safety devices;

We recommend that you sign a service agreement providing for at least one check-up a year.

4.3.4 Non-routine cleaning

Clean the bain-marie on a regular basis, about 3 to 6 times a day, depending on how often it is used. Turn the thermostat to 0. Empty the tank according to the instructions; open the drain valve and clean the bottom of the tank thoroughly to remove all residual dirt. Close the drain valve and fill the tank up to the maximum level mark. Turn the thermostat knob to the required cooking temperature.

5. Installation

5.1 General information

The manufacturer cannot be held liable for any injuries to persons or damage to property resulting from installation errors or from inappropriate use of the appliance and is not responsible for any faults caused by defective installation. In such cases, the warranty shall be null and void.

Installation, maintenance, connection to power supply, and start-up should all be performed by an authorised installer who must ensure compliance with all applicable safety regulations in force in the location where the appliance is being installed.

Check that the appliance is pre-set to operate on the voltage available at the place of use. Should the available voltage rating be different, do not install the appliance.

5.1.1 Regulatory installation conditions

We remind you that all appliances installed in public assembly buildings must meet the requirements specified below. Ensure that installation and maintenance of the appliance are performed in strict compliance with all applicable regulations and standards in force, namely:

- safety regulations on fire hazard and panic in public assembly buildings;
- general regulations applicable to all appliances;
- heating, ventilation, refrigeration, air conditioning, and generation of steam and hot water for sanitary use;
- installation of foodservice cooking appliances;
- specific regulations applicable to each type of public assembly building (hospitals, shops, etc.).

5.2 Exhausting fumes

The appliance should be installed in a well-ventilated area, if possible under an exhaust hood, in compliance with all applicable regulations in force, in order to ensure that cooking vapours and fumes are effectively exhausted.

5.3 Possible environmental interference

If the appliance is installed in the immediate vicinity of other electric appliances, make sure that they do not interfere with each other. They should all have independent power supplies.

5.4 Storage

If the appliance is stored in a warehouse where room temperature is below 0°C (32°F), it should be warmed up to at least +10°C (50°F) before switching it on.

5.5 Unpacking the appliance

Prior to installation, remove all packing materials from the bain-marie. Some parts are wrapped in adhesive film, which should be thoroughly removed (see paragraph "Preparing the appliance for use").

5.6 Disposing of packing materials

Packing materials should be disposed of in compliance with all applicable regulations in force at the installation location. Packing materials should be separated by type and subsequently delivered to specific collection sites. Ensure compliance with environmental protection regulations.

5.7 Positioning

Always close the water shut-off valves and disconnect power to the appliance before attempting to repair or service it.

Before you start working, clean the tank thoroughly and fill it with water up to the level mark shown on the tank itself, at about 50 mm (2") from the upper edge.

Level the appliance using a bubble level. The appliance's height can be adjusted by means of its adjustable feet. In this way, the appliance will be firmly secured.

Ensure compliance with all workplace fire and safety regulations.

This appliance does not generate hazardous temperatures and it can therefore come in contact with the wall.

5.8 Electrical connections

5.8.1 General information

The appliance must always be connected to an earthing (grounding) system while in operation.

The appliance is pre-set to be connected to the electrical switchboard. Before connecting the appliance to the power supply network check:

- that distribution network voltage matches the voltage shown on the appliance's rating plate;
- that the grounding (earthing) system is effective;
- that the power cord is made of rubber and is of at least the same quality as cable type H07RN-F, with wires having a cross section suited to the maximum load they will carry (refer to *"Technical specifications table"* at the end of this manual);
- that an effective multi-pole breaker having a contact gap of at least 3 mm was fitted upstream of the appliance at the time of installation. Automatic thermal-magnetic circuit breakers may be used for this purpose. The multi-pole breaker should be installed in the immediate vicinity of the appliance and be readily accessible. We recommend fitting a thermal-magnetic circuit breaker with built-in fuse protection;
- that the power cord of the appliance is not exposed to direct heat sources.

5.8.2 Connecting a type "Y" power cord to the appliance's terminal block

The power cord can only be replaced by the manufacturer, by the manufacturer's service or by a technician having similar qualifications (the appliance is supplied complete with power cord).

To access the power supply terminal block, proceed as follows:

- disconnect power;
- take out the knob (item 35 in Fig. 6);
- unscrew the screw shown as item 36 to access the screw that fixes the water tap knob;
- unscrew the knob shown as item 37;
- unscrew the screws shown as item 38 to remove the front panel.

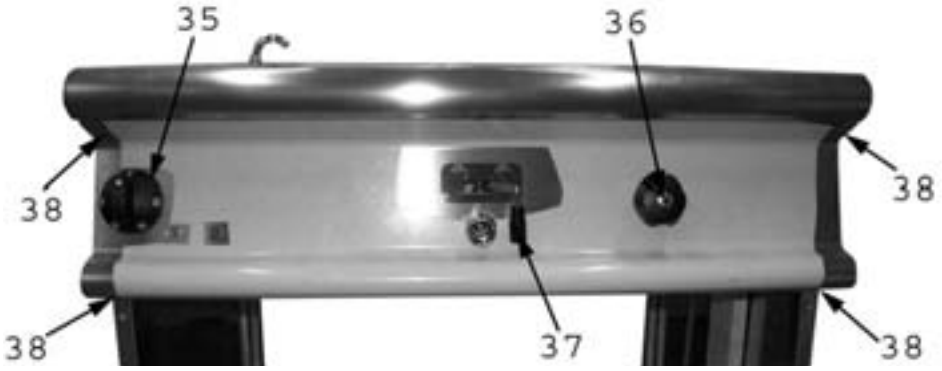


Fig. 6

35. Thermostat knob
36. Water tap
37. Drain valve opening lever
38. Front panel fixing screws.

Fig. 7

40. Terminal block.
41. Cable gland.

The power cord should be locked in place with the cable gland fitted on the appliance so as to avoid the risk of tearing it.

The length of the ground (earth) cable should be such as to allow it to suffer any possible mechanical stress **after** the live leads.

5.8.3 Equipotential bonding terminal

The appliance should be connected to an equipotential bonding system. To that end, there is a connection terminal with the writing "equipotential" on it (Fig. 8) on the lower left side of the appliance, near the supply connections.

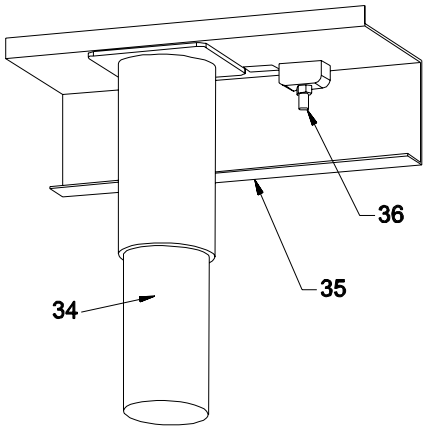


Fig. 8

34. Front left foot
35. Frame
36. Equipotential bonding terminal

5.9 Water connection

To connect the appliance to the water supply, use either hard or soft metal tubing having a proportionate diameter.

5.10 Staff training

Inform all personnel in charge of operating the appliance about how to use it by referring to this user's manual and hand them out the manual.

5.11 Rating plate

The rating plate showing the specifications of the corresponding model is applied in the position shown in the installation and connection drawings and includes the data listed below:

Manufacturer:	
Model:	(see front page)
Serial number:	
Year of manufacture:	
Category:	(see "Technical specifications table")
Heating power:	(see "Technical specifications table")
Natural gas consumption:	(see "Technical specifications table")
Liquid gas consumption:	(see "Technical specifications table")
Supply pressure:	
natural gases: G20	
liquid gases (butane/propane): G30/ G31	
town gas: G110/G120	
Gas inlet pipe size:	(see "Technical specifications table")
Supply voltage:	(see the label on the packing and on the appliance)
Appliance pre-set to use:	

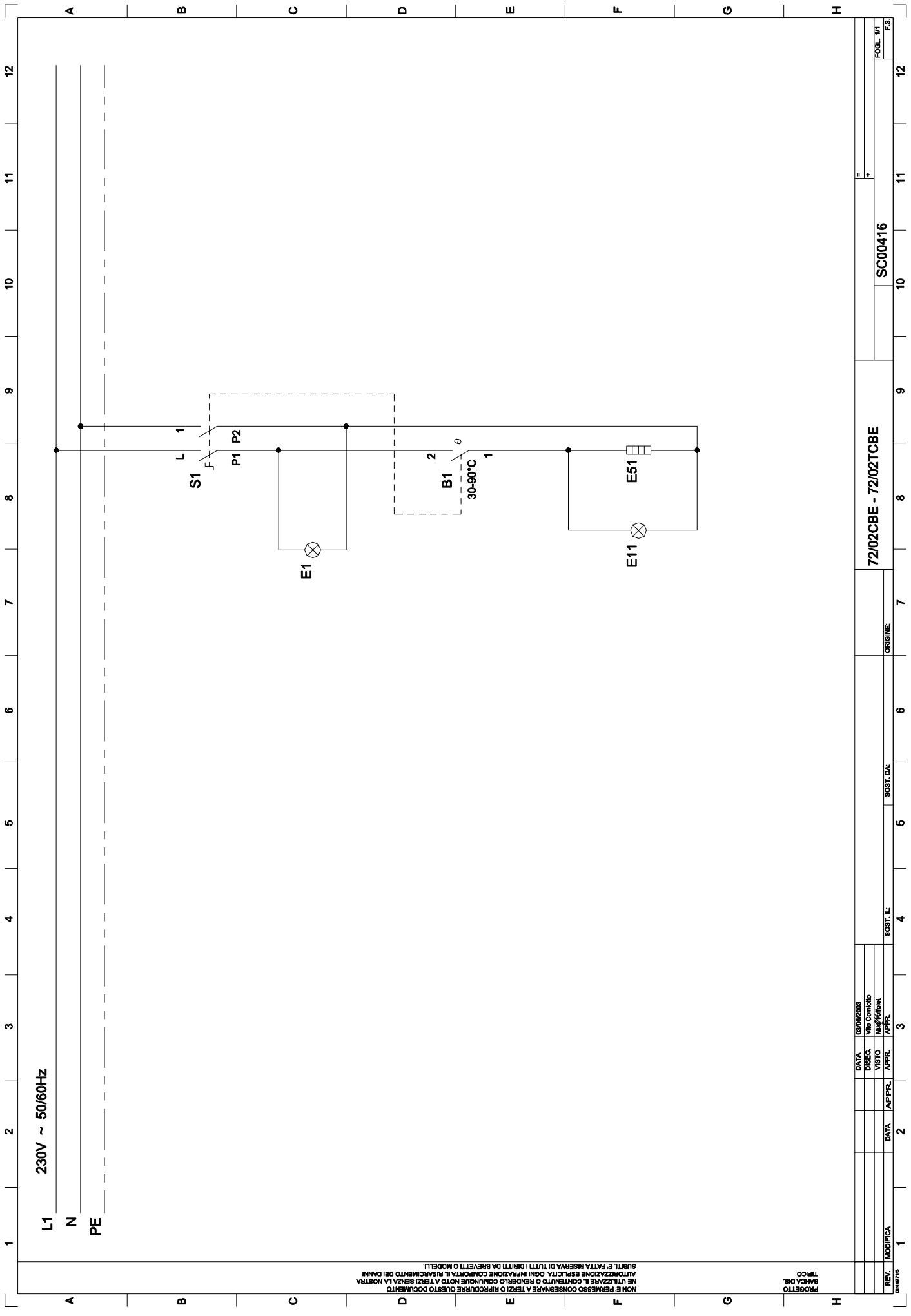
6. Troubleshooting

If the appliance fails to work, check the fuse box for blown fuses (overload protection). Have the overload protection device checked by a qualified technician.

Users are not allowed to perform any maintenance operations on any parts of this appliance. Maintenance should be carried out by an authorized technician.

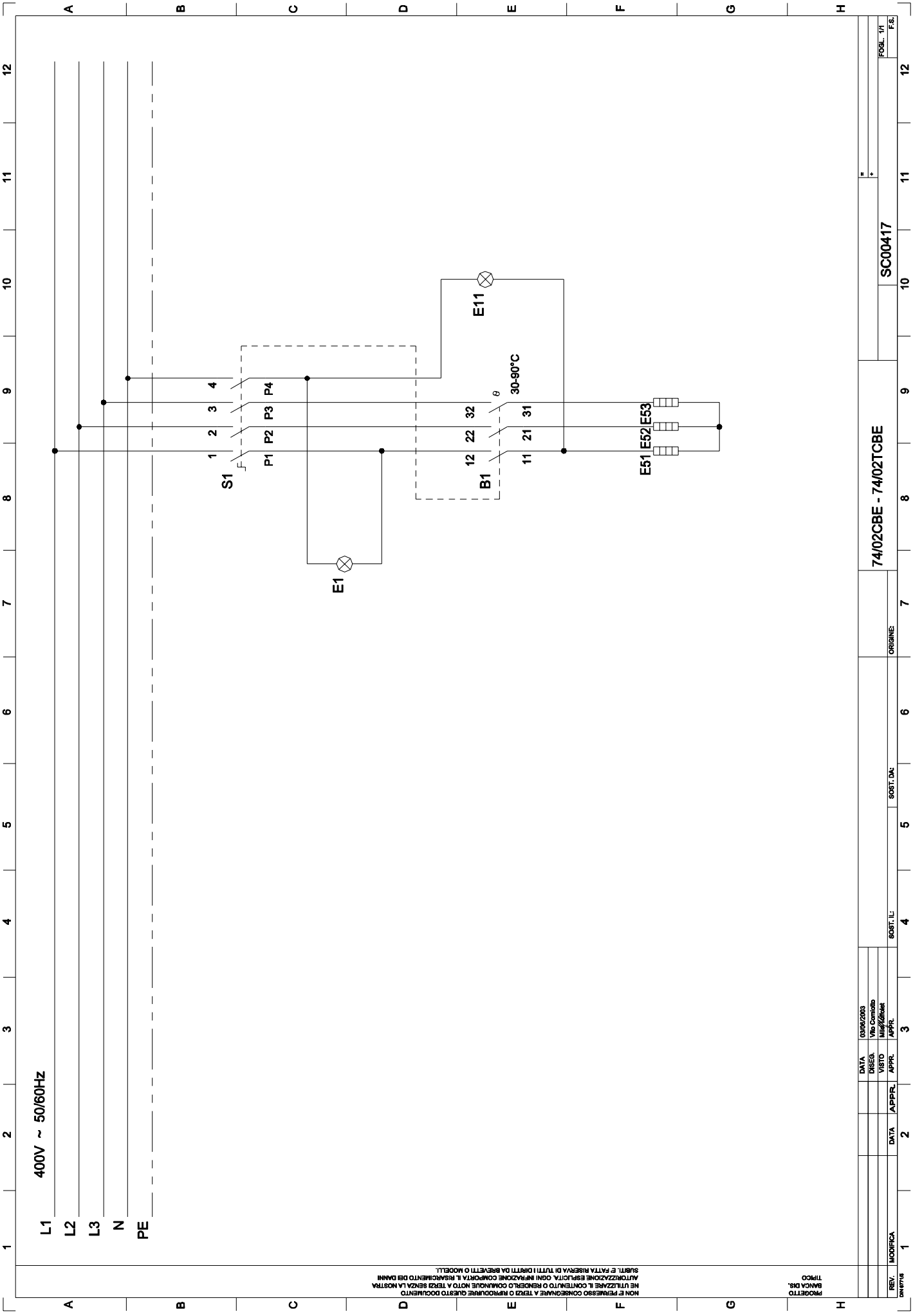
TROUBLE	POSSIBLE CAUSES	WHAT TO DO	
		FOR THE USER	FOR THE AUTHORISED INSTALLER
No water heating	No power supply;	Check that the appliance is powered;	
	Heating elements open		Replace them
The appliance cannot be set to low temperatures	Thermostat damaged		Replace it
Temperature control fails to work	thermostat damaged;		replace the thermostat;

8. Technical specifications



SC00416: Wiring diagram 72/02CBE,72/02TCBE, 1/N/PE ~ 400V 50-60Hz

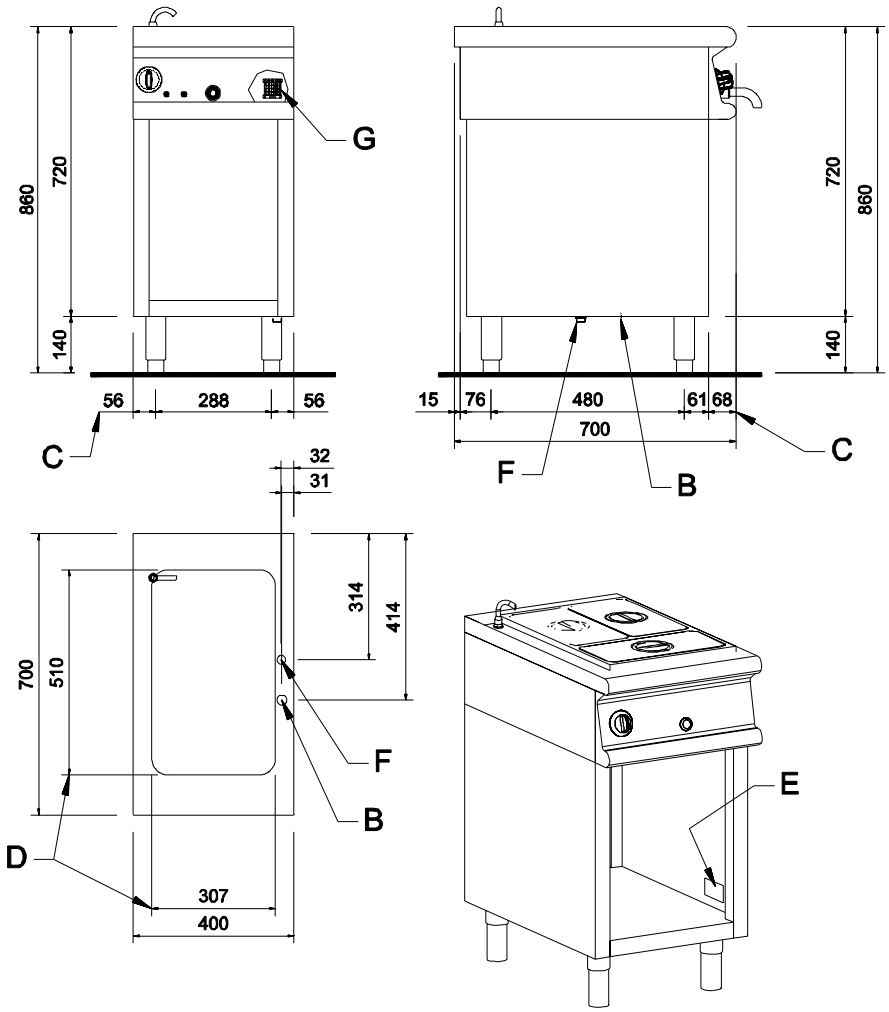
LE00387: key to wiring diagram SC00416			
72/02CBE, 72/02TCBE, - 1/N/PE~400V 50-60 Hz			
Letter code	Art. no.	Descriptions	Specifications
B1	A046250	Control thermostat	30 - 90°C - 1-ph.
E1	A038506	Power indicator light	400V - 150°C
E11	A038506	Operation indicator light	400V - 150°C
E51	A037050	Heating element	2000W - 230V
S1	A046000	Switch	SINGLE-PHASE



SC00417: Wiring diagram 74/02CBE,74/02TCBE 3/N/PE ~ 400V 50-60Hz

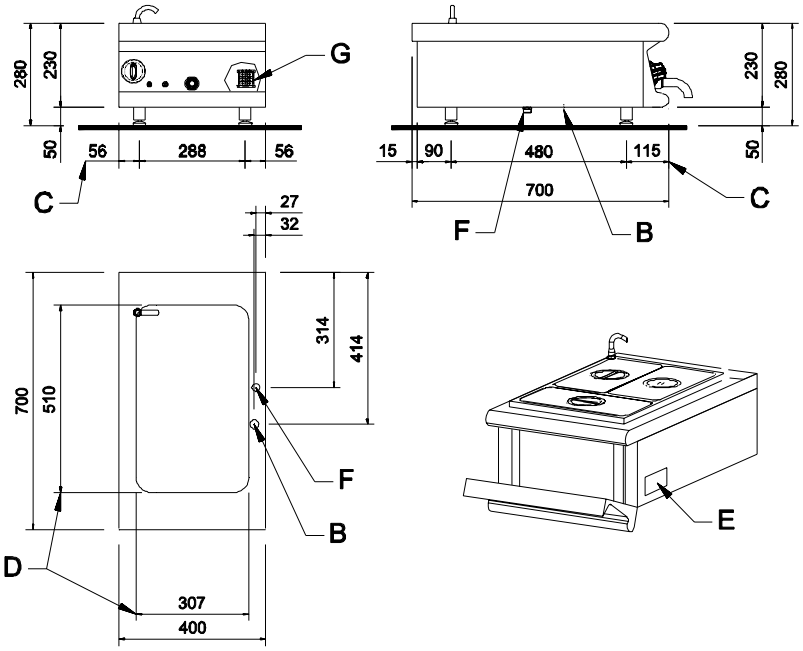
LE00388: key to wiring diagram SC00417			
74/02CBE, 74/02TCBE - 3/N/PE~400V 50-60 Hz			
Letter code	Art. no.	Descriptions	Specifications
B1	A046250	Control thermostat	30 - 90°C - 3-phase
E1	A038506	Power indicator light	400V - 150°C
E11	A038506	Operation indicator light	400V - 150°C
E51-52-53	A037150	Heating element	1500W - 230V
S1	A046001	Switch	THREE-PHASE

Installation drawing 72/02CBE



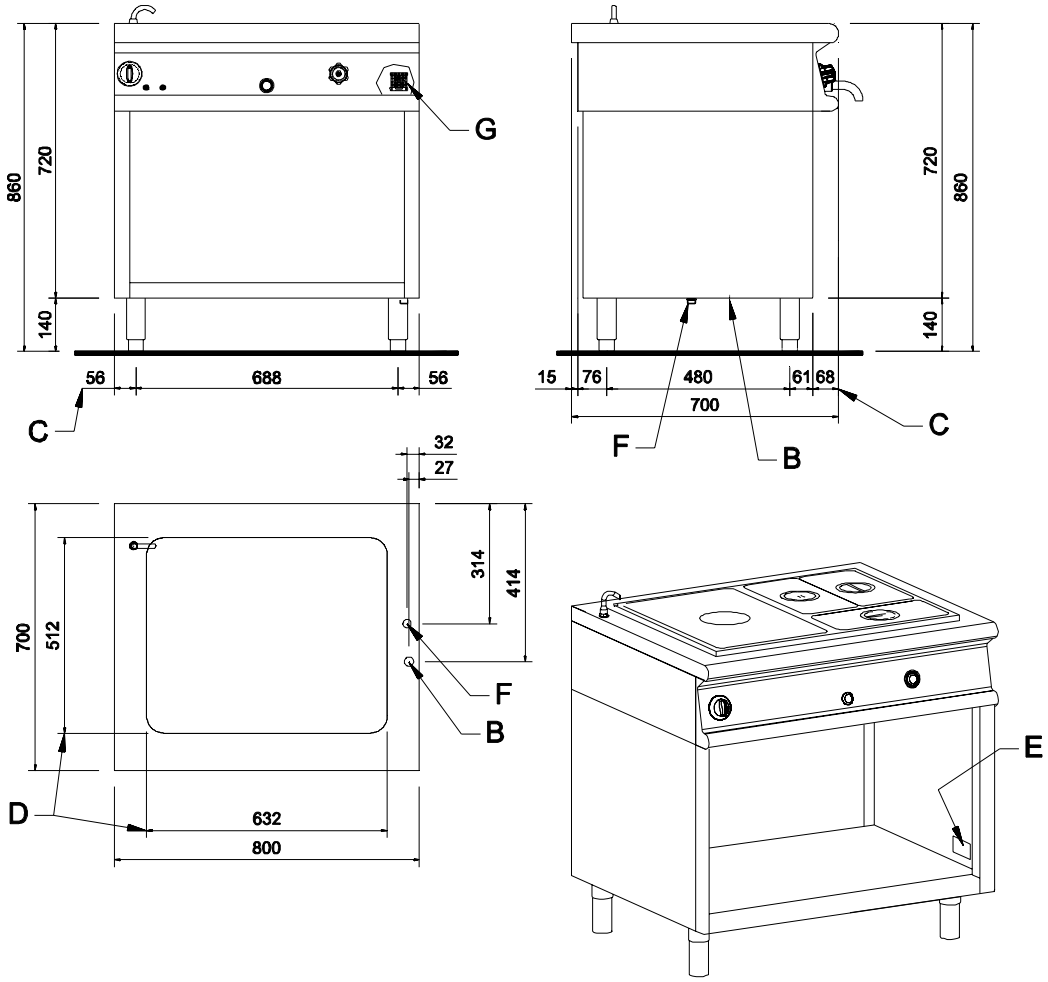
C	Distance between feet
D	Tank dimensions
E	Rating plate
F	Water inlet
G	Terminal block

Installation drawing 72/02TCBE



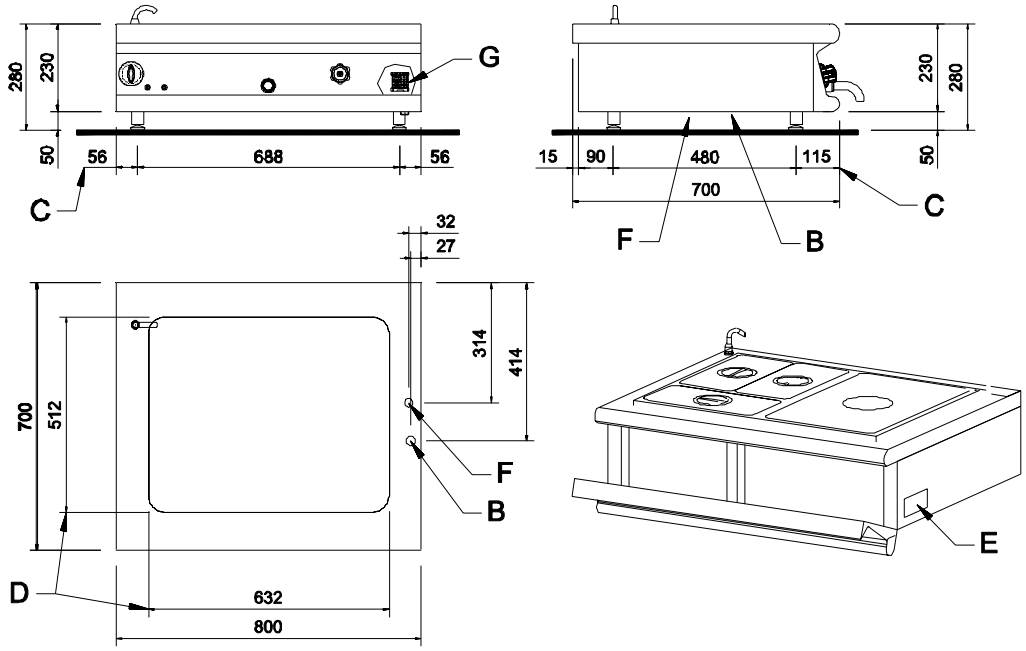
C	Distance between feet
D	Tank dimensions
E	Rating plate
F	Water inlet
G	Terminal block

Installation drawing 74/02CBE



C	Distance between feet
D	Tank dimensions
E	Rating plate
F	Water inlet
G	Terminal block

Installation drawing 74/02TCBE



C	Distance between feet
D	Tank dimensions
E	Rating plate
F	Water inlet
G	Terminal block

Item	Model	Type	Voltage	Specification
External dimensions WxDH, freestanding unit		72E		400x700x860/900 mm
External dimensions WxDH, freestanding unit		74E		800x700x860/900 mm
External dimensionsWxDxH, tabletop unit		72TE		400x700x280 mm
External dimensionsWxDxH, tabletop unit		74TE		800x700x280 mm
Volume with package	E	72E		0.4 m3
Volume with package	E	74E		0.75 m3
Volume with package		72TE		0.16 m3
Volume with package		74TE		0.29 m3
Total weight	E	72E		47 Kg
Total weight	E	74E		67 Kg
Total weight	E	72TE		30 Kg
Total weight	E	74TE		47 Kg
Rated output	E	72E,72TE		2 KW
Rated output	E	74E,74TE		4.5 KW
Max. current	E	74E,74TE	A	6.5 A
Max. current	E	74E,74TE	H	11.3 A
Max. current	E	72E,72TE	P	8.7 A
Minimum lead gauge	E	74E,74TE	A	5 x 1.5 mm2
Minimum lead gauge	E	74E,74TE	H	4 x 1.5 mm2
Minimum lead gauge	E	72E,72TE	P	3 x 1.5 mm2
Supply voltage	E	74E,74TE	A	3/N/PE ~400V 50Hz
Supply voltage	E	74E,74TE	H	3/PE ~230V 50Hz
Supply voltage	E	72E,72TE,	P	1/N/PE ~230V 50Hz

E=700 Restaurant Serie
72E=72/02CBE, 72TE=72/02TCBE, 74E=74/02CBE, 74TE=74/02TCBE

A=3/N/PE~400/230V 50Hz, H=3/PE~230V 50Hz, P=1/N/PE~220-240V 50Hz

DICHIARAZIONE DI CONFORMITÀ CE
CE CONFORMITY DECLARATION
DECLARATION DE CONFORMITE CE
CE KONFORMITÄTSERKLÄRUNG
DECLARACIÓN DE CONFORMIDAD CE

Si dichiara che il seguente apparecchio:	**Bagnomaria elettrico serie 700 New**
We declare that the following equipment:	**Electric bain marie series 700 New**
Nous déclarons que l'appareil suivont:	**Bain marie electriques gamme 700 New**
Wir erklären, dass dieses Gerät:	**Elektro Wasserbaeder serie 700 New**
Se declara que el siguiente aparato:	**Bano maria eléctrico gama 700 New**

Mod.: 72/02CBE, 74/02TCBE, 74/02CBE, 72/02TCBE, 7-BME

è conforme ai requisiti basilari previsti dalle seguenti direttive CEE:
is in specification with the fundamental requirements of the following EC directive:
est conforme aux exigences fondamentales des directives de la Communautè Européenne suivantes:
entspricht mit den grundlegenden Anforderung der folgenden EG-Richtlinien:
es conforme a los requisitos básicos previstos de las siguientes disposiciones CEE:

73/23 CEE; 93/68 CEE; 89/336 CEE; 92/31 CEE

Sono state applicate le seguenti norme armonizzate:
The following harmonised standards were applied:
Les normes harmonisèes suivantesfurent appliquèes:
Folgende harmonisierte Normen wurden angewandt:
Han sido aplicadas las siguientes normas armonizadas:

EN 60335-1; EN 60335-2-50; EN 60555-3; EN 55014

Bribano, 06/02/04

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Amministratore Delegato
P. Candiago

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Codice Fiscale e Partita IVA IT 009177220253