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Diamond
catering equipment

“SELF IN”

CE

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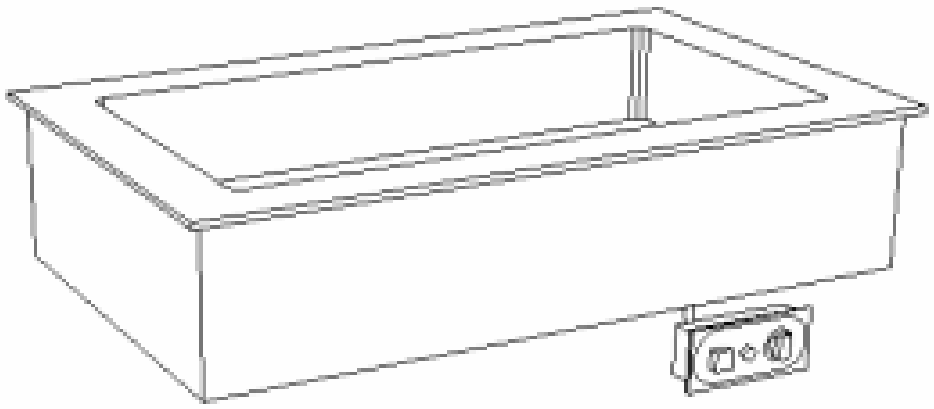
- INSTALLATION, OPERATING AND MAINTENANCE MANUAL FOR BAIN-MARIE UNITS



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INSTALLATION, OPERATING AND MAINTENANCE MANUAL
FOR BAIN-MARIE UNITS
"SELF IN"

1. WARNINGS

Read this manual carefully **before** commencing installation.
The manual has been devised to furnish the user with all the information required to operate the equipment safely, from its transportation right through to scrapping.
The manual must be looked after carefully so that it is available for future reference. In the event the equipment is sold, the manual must also be handed over to the new user.

In order to use the equipment correctly:

- Do not tamper with the safety devices;
- Use the equipment only for the purpose for which it was specifically designed;
- Do not use the basin for heating without water;
- Keep unauthorized personnel away from the equipment;
- Have maintenance performed by qualified personnel only;
- Switch off the equipment in the event of a fault or irregular operation;
- Only use spare parts supplied or indicated by the Manufacturer.

ATTENTION: ONLY QUALIFIED ELECTRICIANS ARE AUTHORIZED TO ACCESS THE MAIN CONTROL BOARD AND ANY OTHER ELECTRICAL PARTS, WHETHER FOR INSTALLATION OR MAINTENANCE PURPOSES.

The Manufacturer declines all responsibility for damage to property or bodily injury as a result of non-compliance with the instructions and warnings contained herein.
If in any doubt, and whenever the need arises, contact the DEALER.

2. INTRODUCTION

The equipment conforms to the EEC Directives 2004/108 CEE e 2006/95 CEE.
In addition, the following standards have also been applied: CEI EN 60335-1, CEI EN 60335-2-49, CEI EN 60335-2-50, EN 55014, EN 61000-3-2 and EN 61000-3-3.

3. DESCRIPTION OF THE EQUIPMENT

Our BAIN-MARIE UNITS are composed of a basin welded to the top and curved on all sides to allow easy cleaning.
Their purpose is to keep food warm in GN 1/1 basins.
The range is composed of models with a capacity of 1, 2, 3, 4, 5, 6, GN 1/1, suitable for holding basins with a depth of 200mm.
The maximum operating temperature is around 90°C, water filling is electrical via solenoid valves and there is a removable overflow drain. Control panel with digital heat regulator.

4. TRANSPORTATION AND HANDLING

If the equipment is transported on a pallet, it must be unloaded using a lift truck or other appropriate lifting means operated by trained personnel. The maximum weight is given in Table A.
Manoeuvring errors might cause injury as a result of crushing. Any blows to the surfaces of the equipment will result in immediate damage.
During this phase, anyone not directly involved in the operation must not be allowed to remain in the area.
The personnel handling the equipment must wear appropriate personal safety gear (e.g. work gloves, safety boots).

5. OPERATING CONDITIONS AND TECHNICAL FEATURES

Our BAIN-MARIE UNITS have been designed solely for the preservation and display of warm foods, contained in special unified containers, for use in rooms used for group catering. Any other use shall be considered improper.
The maximum operating temperature of the basin is 90° C.
The BAIN-MARIE UNITS are available in the configurations featured in Table A.

5.1 Controls

The control devices are grouped together on the instrument panel illustrated in Fig. 1. Electrical components conform to standards.

5.2 Protection and safety devices

- Safety devices:
  Safety thermostat which trips in the vent of abnormal operation.
- Personal safety gear:
  The food containers can become very hot, and it is therefore advisable to use pot-holders or oven gloves.
- Special provisions guarding against residual hazards:
  Make sure authorized personnel only are allowed access to the unit, and that they are suitably instructed as to the potential dangers owing to high temperatures.

6. INSTALLATION

6.1 Preliminary operations

The user must provide for the supply of electrical energy as shown in Fig. 3, in compliance with current standards.
There must be a water supply pipe with a pressure in the range 1.5 to 3 bar, featuring a shutoff cock, for filling the basin. Drinking water must be used and, where possible, should be demineralised. The water may be pre-heated to no more than 50 °C. For the drain, pipe work must be used that is equipped with a siphon. The tubes to be used are ¾"GAS for filling, and ½ "GAS for draining.

6.2 Positioning

Move the equipment into place with the aid of a pallet truck, where necessary. If the unit is moved after it has been unpacked, protect the surfaces from knocks.
Once installation is complete, the protective film can be removed. This operation should be performed very slowly to prevent the glue from remaining attached to the surfaces. If this happens, use kerosene or petrol to remove it.

6.3 Plumbing connections

Supply and waste pipes can be seen under the lower shelf. Connect the supply pipe **C** to the water supply pipe using a flexible hose. Connect the basin's waste pipe **S** to the siphon of the waste pipe installed in the room.
Once installation is complete, the protective film can be removed from the surfaces. This operation should be performed very slowly to prevent the glue from remaining attached to the surfaces. If this happens, use kerosene or petrol to remove it.

6.4 Electrical connections

Connections must be made by a qualified electrician in accordance with the local standards in force. The electrical circuit of the unit is designed to operate at a power supply voltage in accordance with the configurations shown in Table A, with a frequency of 50/60Hz. See the electrical diagram, Fig. 2, applicable to the model you have purchased.
The electrical connection is made by connecting the cable to the terminal board of the unit.
The cable must have the features of type H05 RNF or better, and must feature an efficient earth wire of an appropriate size for the total power of this unit and any other units or accessories connected on the same terminal board **(see rating plate).** The units electrical supply system must feature an appropriately sized automatic omnipolar circuit breaker upstream that assures a gap between the contacts of at least 3mm. There must not be any breaks in the earth cable.
The electrical safety of this equipment is only assured when the above-mentioned conditions are met and if the systems equipotential situation is also in order (use the connection screw located near the power cable entry and the label featuring the symbol) ⏚

The manufacturer declines all responsibility in the event these safety standards are not complied with.

7. OPERATION / USE

7.1 Operating tips

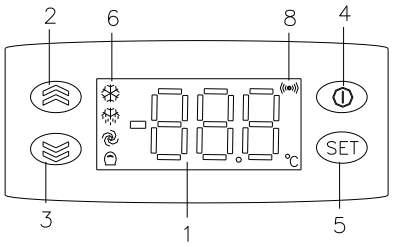
- This appliance must only be used for its intended purpose. This consists of keeping foods warm by bain-marie in GN containers. Any other use shall be considered improper.
  The size of the basin means that, lengthwise, it can accommodate 1, 2, 3, 4, 5, 6 GN 1/1 modules respectively.
- Before using the equipment for the first time, clean it inside with lukewarm water and neutral soap, rinse and dry thoroughly. Avoid using abrasive detergents or scouring powders.

7.2 Starting up the BAIN-MARIE BASIN

- Turn on the circuit breaker located upstream from the equipment.
- Make sure the overflow is properly inserted in the waste.
- Use the water filling button **C** on the control panel **(Fig. 1),** fill the basin at least to the highest level notch marked on the overflow pipe (approx. 2 or 3 cm from the bottom).
- Switch on the basin digital thermostat **B (basin)** of Fig. 1 and press the buttom 4 for at least 5 " (see picture of thermostat)
- Adjust the digital heat regulator **B** to the desired temperature (the heat adjuster set to 85°C).
- The digital heat regulator B indicates the temperature in the basin.

- **ATTENTION: a) DO NOT HEAT THE BASIN WITHOUT WATER INSIDE. Overheating will damage the basin and the heating elements.**
  b) CHECK on a regular basis to make sure that THE WATER LEVEL is not allowed to fall below the lowest level notch marked on the overflow pipe;

7.3 Digital heat regulator



Legend
1- Display
2- "Increase value" button
3- "Decrease value" button
4- Press at least " to activate the stand-by function , "Exit function" button
5- "Enter setpoint" button, enter controls confirmation menu and alarms view menu
6- Red led alight, heating element on working
8- Red led alight, active alarm; if lightening, silenced alarm

USE

During the usual working the instrument shows the temperature pointed out by the feeler which is in contact with the basin or inside the cabinet.

To visualize the present setpoint value: (value of established temperature) push and release **set** button, the word "**set**" appears, push again "**set**" button.

To modify the setpoint value push and release **set** button, the word "**set**" appears, push again "**set**" button and the set value appears. To modify it push by 15 seconds the ▲(2) o▼(3) buttons to increase or decrease the value. After the change push **set** button to save the new value.

The setpoint can be set by settled limits of the highest and lowest temperature.

SIGNALS AND ALARMS

"E1" on the display indicates **damaged thermostat feeler** and there could be one of the following anomaly: basin feeler type not correct, basin feeler defective, connection defect. Check if the feeler is intact and if connection between instrument and feeler is correct.

"AH1" **high temperature alarm** on display indicates that the reading value is higher then the pre-setted max. value; it causes no effect to the regulation, the alarm stops when the temperature decreases under the presetted max. value.

"AL1**"** **low temperature alarm** on display indicates that the reading value is lower then the presetted minimum value, it causes no effect to the regulation, the alarm stops when the temperature rises over the presetted minimum value.

Only qualified personnel can modify the **CONFIGURATION PARAMETERS** of the thermostat, established by the Manufacturer, using the instructions of the instrument.

7.4 Shutdown

Switch the equipment off by switching the digital thermostat **B** off.

Turn off the circuit breaker upstream from the equipment and close the supply pipe valves (if connected to a fixed system).

THE BASIN MUST ONLY BE DRAINED ONCE THE EQUIPMENT HAS COOLED.

In the event the unit is to be left off for a lengthy period:

d) disconnect the power and water supply;
e) empty the basin and clean thoroughly;
f) protect the stainless steel surfaces by covering them with Vaseline oil, rubbing vigorously with a cloth soaked in the oil;

8. CLEANING AND MAINTENANCE

8.1 Routine maintenance

The routine and preventive maintenance basically consists in the weekly cleaning of the stainless steel parts with lukewarm soapy water, rinsing abundantly and drying thoroughly. The unit must only be cleaned after first disconnecting the power supply upstream from the equipment.

Should lime scale form on the bottom of the basin, clean with a vinegar solution or special products before rinsing abundantly with water and drying.

Attention:

- Under no circumstances should you use abrasive or corrosive detergents and utensils such as steel wool, brushes or metal scrapers.
- Bleach, hydrochloric acid and other compounds containing chlorine will damage the stainless steel.
- The coloured parts must be cleaned with silicone wax.
- The floor under the unit must not be washed with corrosive substances that might generate vapours damaging the equipment.
- During cleaning, **do not wash the equipment with jets of water.**

8.2 Non-routine maintenance

Special maintenance must be performed by qualified personnel in the event of a fault or anomaly, **wherever possible with the equipment disconnected from the power mains.**

In this case, repairs or replacements might be required. The faulty parts must only be replaced with materials and components identical to the originals or specified by the Manufacturer.

The replacement of components or the modification of the equipment by the user without written permission from the Manufacturer, or the use of non-authorized spare parts, shall instantly cause the warranty to be void.

8.3 Possible errors

If the BASIN does not heat, check the power supply and make sure the digital temperature regulator is not at the minimum setting.

If, after performing the checks indicated, correct operation is still not achieved, switch off the equipment and **contact the supplier without delay.**

9. SCRAPPING

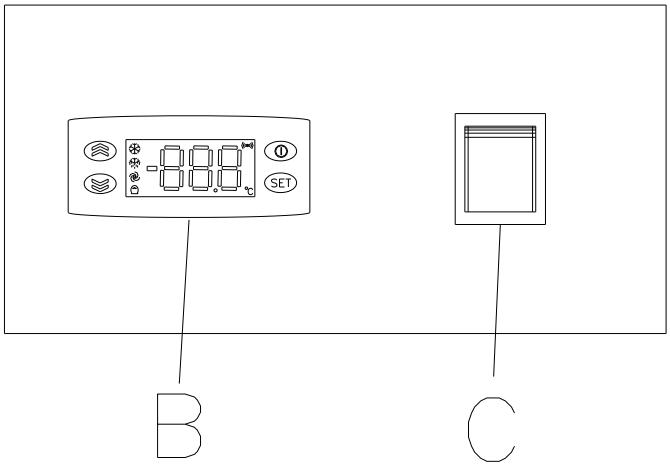
At the end of its service life, the equipment must be disconnected from the power mains before disassembling the various components. Special care must be taken to avoid the risk of accidents associated with the form and weight of each component.

The various parts (electrical components, rubber piping, cable sheaths, etc.) must be selected so as to make the best possible contribution to the protection of the environment in compliance with the laws in force.

Tabella A: CARATTERISTICHE TECNICHE ELEMENTI BAGNOMARIA - TECHNICAL FEATURES OF BAIN-MARIE UNITS - TECHNISCHE MERKMALE BAINMARIE-ELEMENTE - CARACTERISTIQUES TECHNIQUES ELEMENTS BAIN MARIE

Mod.	IBM1	IBM2	IBM3	IBM4	IBM5	IBM6
Dimensioni esterne - Overall dimensions - Aussenmasse mm - Dimensions externes mm.:						
L=lunghezza- length-Länge- longueur :	490	805	1135	1455	1780	2105
P=profondità-depth- Tiefe- profondeur:	635-700	635-700	635-700	635-700	635-700	635-700
H = altezza- height- Höhe- hauteur:	270	270	270	270	270	270
H1 = altezza- height- Höhe- hauteur:	380	380	380	380	380	380
Dimensioni foro per incasso- Dimensions for hole for built-in installation- Bohrungsmass für Einbau- Dimensions trou pour encastrement mm.:						
Lunghezza- length- Länge– longueur : mm	455	770	1100	1420	1745	2070
Profondità – depth - Tiefe- profondeur :mm	600	600	600	600	600	600
Dimensioni vasca/basin/wanne/bac : mm.:						
Lunghezza- length- Länge– longueur : mm	310	630	960	1280	1605	1930
Profondità – depth - Tiefe- profondeur : mm	510	510	510	510	510	510
Altezza – height – Höhe – hauteur : mm	210	210	210	210	210	210
Capacità vasche-Basin capacity-Kapazität- Capacité des bacs	1 1/1	2 1/1	3 1/1	4 1/1	5 1/1	6 1/1
Diametro entrata acqua-∅ water inlet- Durchmesser Wassereintritt- Diamètre entrée eau	3/4”	3/4”	3/4”	3/4”	3/4”	3/4”
Diametro uscita acqua-∅ water outlet- Durchmesser Wasseraustritt-Diamètre sortie eau	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”
Potenza totale-Total power-Gesamtleistung KW- Puissance totale	1	2	3	3	5	6
Tensione alimentazione- Supply voltage- Speisespannung- Tension alimentation	230V 1N	230V 1N	380V 3F+N	380V 3F+N	380V 3F+N	380V 3F+N
Peso Max-Max weight-Höchstgewicht-Poids (Kg).	25	33	40	47	65	75

Fig. 1: PANNELLO COMANDI – CONTROL PANEL – SCHALTFELD - PANNEAU DE COMMANDES

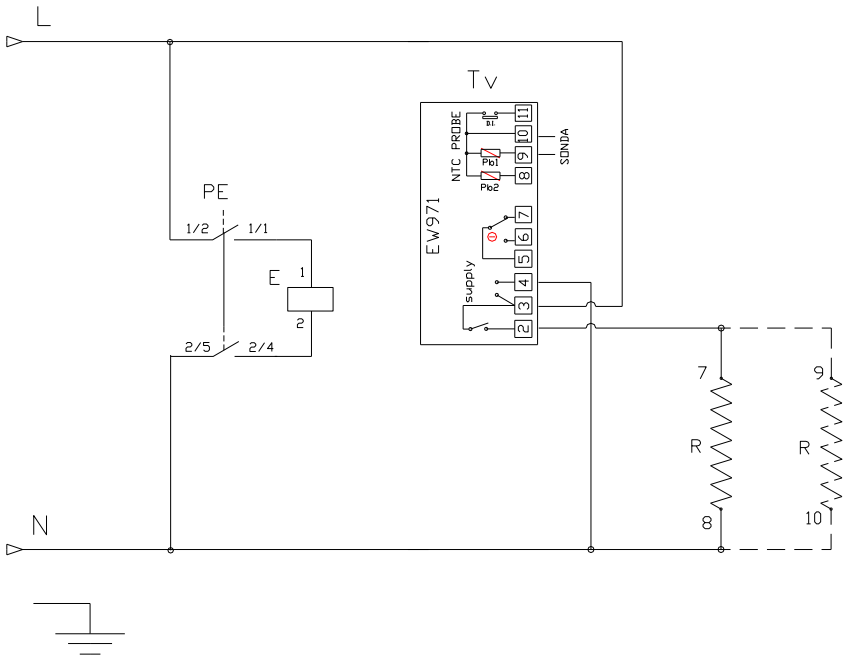


B = TERMOREGOLATORE DIGITALE VASCA **C = PULSANTE CARICO ACQUA**	**B = THERMOSTAT BEHÄLTER/ABLAGE** **C = TASTE WASSEREINLAUF**
B = BASIN/SHELF TEMPERATURE THERMOSTAT **C= WATER FILLING**	**B = THERMORÉGULATEUR NUMÉRIQUE DU BAC** **C = BOUTON REMPLISSAGE D'EAU**

Fig. 2: SCHEMA ELETTRICO – WIRING DIAGRAM – SCHALTPLAN - SCHEMA ELECTRIQUE

BAGNOMARIA SU VASCA 1 GN1/1 - 2 GN1/1 - BAIN-MARIE ON BASIN 1 GN1/1 - 2 GN1/1
BAINMARIE IN DER WANNE 1 GN1/1 - 2 GN1/1 - BAIN-MARIE SUR BAC 1 GN1/1 - 2 GN1/1

Mod. : IBM1 - IBM2



BAGNOMARIA SU VASCA 3 GN1/1-4 GN1/1 - BAIN-MARIE ON BASIN 3 GN1/1-4 GN1/1
BAINMARIE IN DER WANNE 3 GN1/1-4 GN1/1 - BAIN-MARIE SUR BAC 3 GN1/1-4 GN1/1

Mod. : IBM3 – IBM4

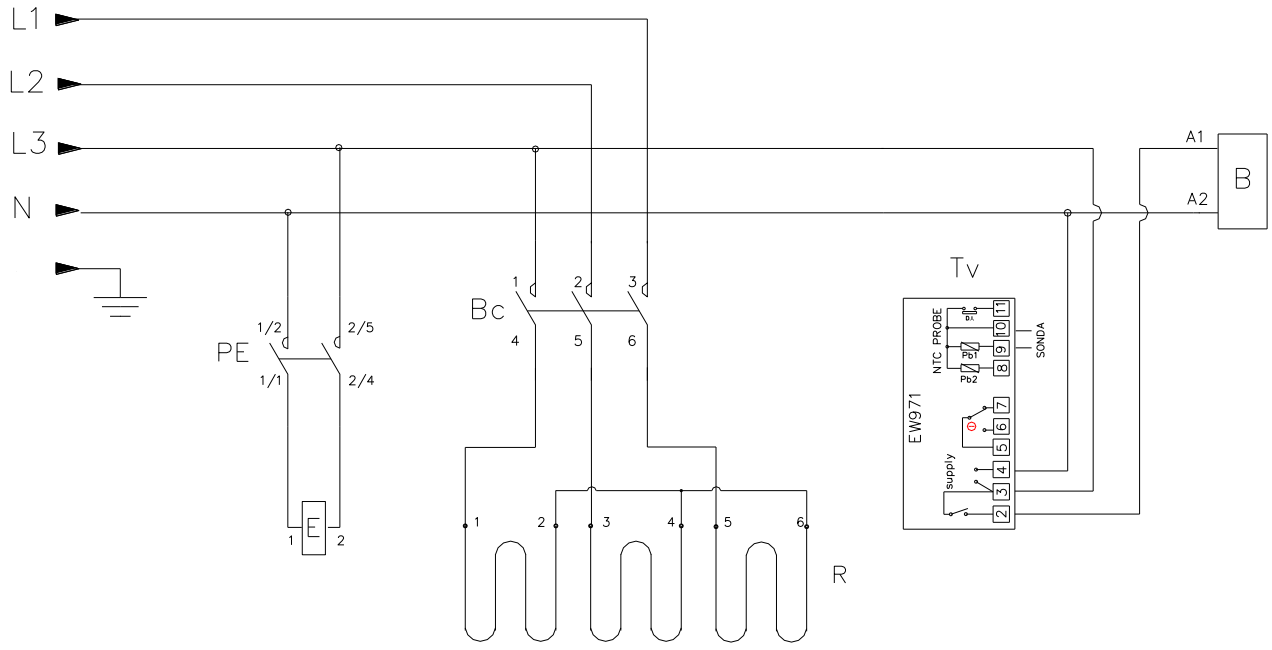
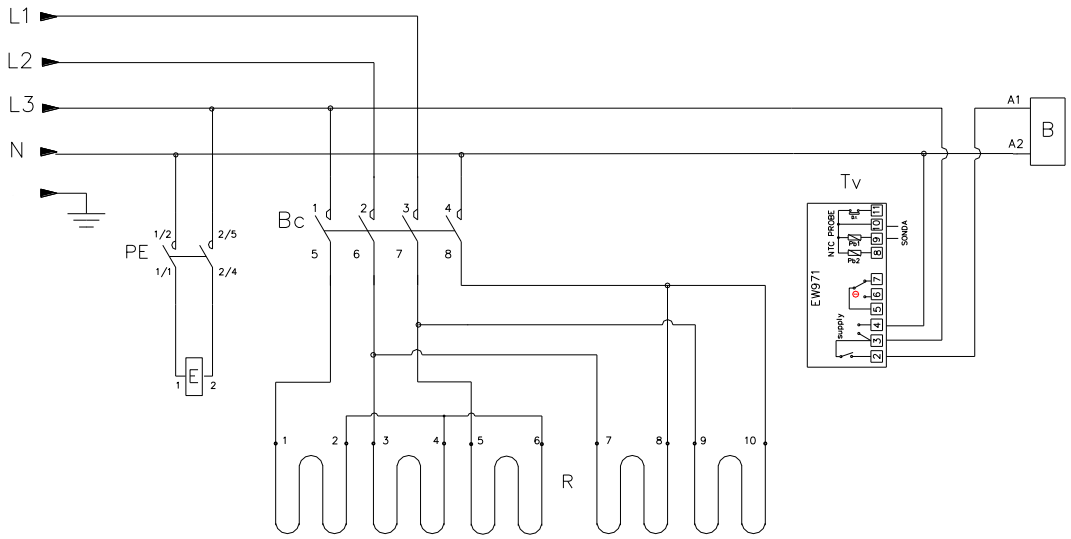


Fig. 2: SCHEMA ELETTRICO – WIRING DIAGRAM – SCHALTPLAN - SCHEMA ELECTRIQUE

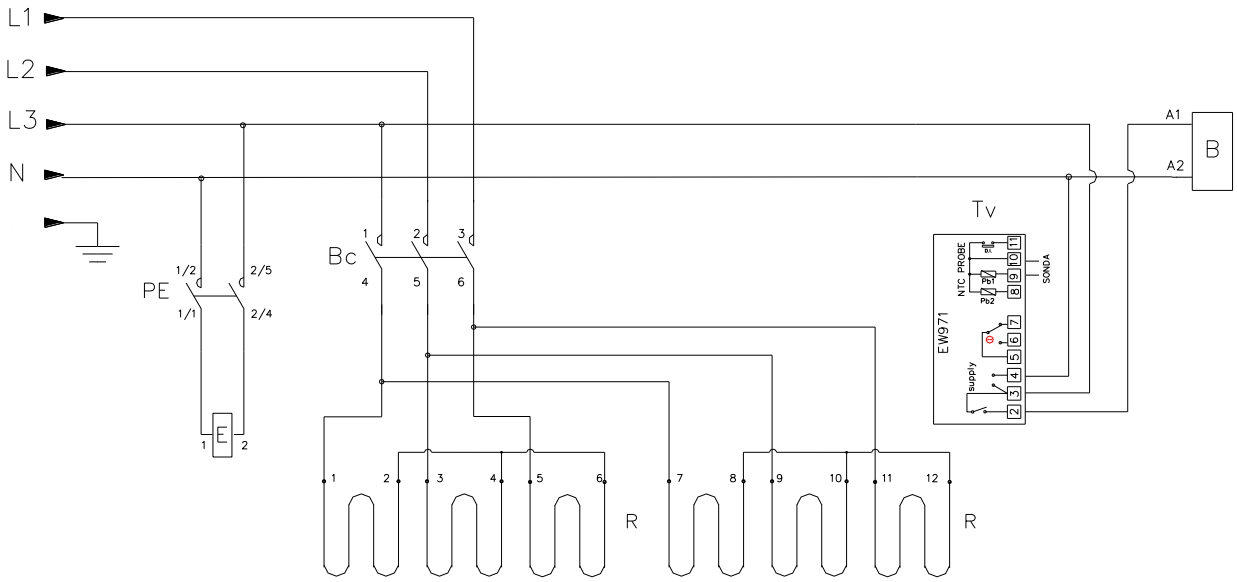
BAGNOMARIA SU VASCA 5 GN1/1 - BAIN-MARIE ON BASIN 5 GN1/1 –
BAINMARIE IN DER WANNE 5 GN1/1 - BAIN-MARIE SUR BAC 5 GN1/1

Mod. : IBM5



BAGNOMARIA SU VASCA 6 GN1/1 - BAIN-MARIE ON BASIN 6 GN1/1 –
BAINMARIE IN DER WANNE 6 GN1/1 - BAIN-MARIE SUR BAC 6 GN1/1

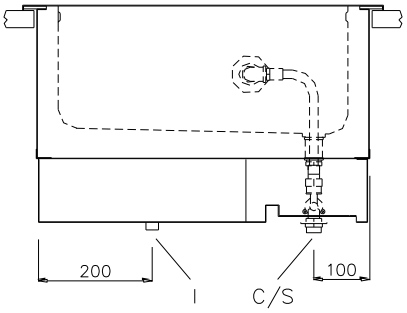
Mod. : IBM6

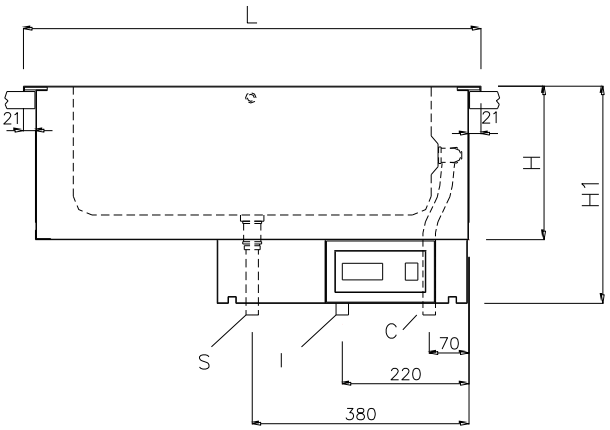


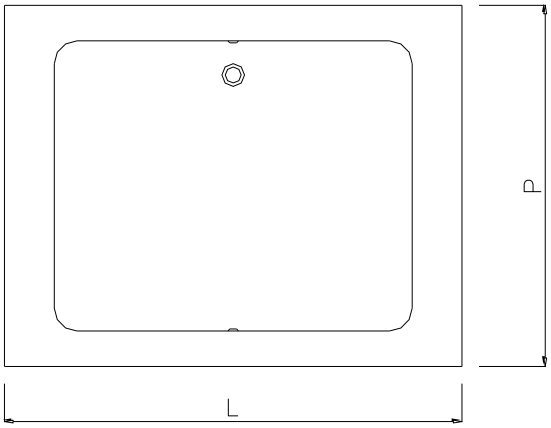
Tv	**TERMOSTATO REGOLAZIONE VASCA**	**BASIN REGULATOR THERMOSTAT**	**THERMOSTAT EINSTELLUNG WANNE**	**THERMOSTAT REGLAGE BAC**
B	**BOBINA TELERUTTORE**	**ELECTROMAGNETIC SWITCH COIL**	**SPULE FERNSCHALTER**	**BOBINE TELERUPTEUR**
BC	**CONTATTI TELERUTTORE**	**ELECTROMAGNETIC SWITCH CONTACTS**	**KONTAKTE FERNSCHALTER**	**CONTACTS TELERUPTEUR**
R	**RESISTENZA RISCALDANTE**	**HEATING ELEMENT**	**HEIZKÖRPER**	**RESISTANCE CHAUFFANTE**
E	**ELETTROVALVOLA**	**SOLENOID VALVE**	**E-VENTIL**	**VALVE ELECTRIQUE**
PE	**PULSANTE ELETTROVALV.**	**SOLENOID VALVE BUTTON**	**TASTE E-VENTIL**	**BOUTON VALVE ELECTRIQUE**

Fig. 3: SCHEMA DI INSTALLAZIONE- INSTALLATION DIAGRAM - INSTALLATIONSSCHEMA - SCHEMA D'INSTALLATION

ELEMENTI BAGNOMARIA - BAIN-MARIE UNITS - BAINMARIE-ELEMENTE - ELEMENTS BAIN-MARIE







I – INGRESSO CAVO ELETTRICO **C – CARICO ACQUA 3/4"** **S – SCARICO ACQUA 1/2"**
I – ELECTRIC CONNECTION **C – WATER INLET 3/4"** **S – WASTE WATER OUTLET 1/2"**
I – CABLE D'ALIMENTATION **C – ENTREE EAU 3/4"** **S – EVACUATION EAU 1/2"**
I – ELEKTROANSCHLUSS **C – EINLAUF WASSER 3/4"** **S – WASSERABFLUSS 1/2"**