

MANHATTAN

MWA 3/MWA 4/MWA 5

HEATED SERVERY COUNTER

Translation of the original operating instructions



## General Information

**Copyright** These instructions are protected by copyright. None of this information may be reproduced, distributed, used to the advantage of our competitors or made accessible to third parties either completely or in part.

**Technical changes** Subject to modifications for the purpose of technical improvement.

**Product documentation** Translation of the original operating instructions; Target group: operating personnel, kitchen directors.

**Typographical conventions**

-  Important **note** on special features or special cases.
- i** **Explanatory information** in chapters or sections containing instructions.
-  **Cross reference** to a chapter, section or external document.
- ✓ **Requirement** which must be fulfilled before the subsequent steps can be carried out.
- ▶ **Action** or activity which must be carried out.

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### Unit model XYZ

A section identified in this way applies only to a particular **unit model** or unit option.

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### Warnings

 **Signal word!**

**Type and source of danger**

Possible consequences of non-compliance with the warnings.

- ▶ Measures to avoid dangers and the consequences thereof.
- 

The signal word (caution, warning, danger) informs of the level of danger.

**Caution** warns of possible light bodily injuries and damage to property.

**Warning** warns of possible serious bodily injuries.

**Danger** warns of possible most severe/fatal bodily injuries.

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## About this product

**Application** The MANHATTAN heated servery counter is designed for the following applications:

- Presentation of food in Gastronorm containers
- Temperature maintenance of food in Gastronorm containers
- Serving food.

The unit is used for presenting and serving food, but not for storing food for extended periods.

The MANHATTAN heated servery counter is not suitable for heating up or preparing food.

The MANHATTAN heated servery counter is primarily suited for use in catering facilities of schools, companies, government offices, hospitals, retirement homes (canteens, cafeterias and dining halls) and in the food service industry and hotels.

It is not permissible to transport persons with or on the unit or its attachments. The unit may not be used as a "ladder substitute" or as climbing equipment (for children). There is a danger of tipping.

The unit may not be used to transport or store dangerous or toxic substances/liquids.

**Conditions of use** **Environment**

The unit may be used when the ambient temperature is between +15 °C and +32 °C and at normal humidity (without moisture condensation).

**Instruction of third parties**

If the unit is lent to third parties, these persons must be instructed in the safe handling of the unit and possible dangers must be pointed out.

**Product features** **General information**

The MANHATTAN heated servery counter is an serving module for warm food with a top surface made of stainless steel or natural stone.

Depending on the model, the MANHATTAN heated servery counter has 3, 4 or 5 continuous welded-in stainless steel bain-marie wells for accepting Gastronorm containers. Each bain-marie well can be heated separately. The mechanical temperature control is based on a capillary-tube thermostat.

An installation compartment with a drain valve for draining off the water from the bain-marie wells and an optional socket outlet for the electrical connection of several modules is integrated in the unit base. Depending on the unit model, the unit base also features an open or closed design on the operator side.

The compartment open on the operator side is equipped on the sides with 4 pairs of support ledges for holding one or more optional middle shelves.

The compartment closed on the operator side is equipped with several compartments for holding a maximum of 4 GN containers each of the size GN 1/1-65 or their subdivision. The front of the closed compartments is closed off with double-walled doors with grip recesses and snap closures. Lockable doors can be equipped either with common locks or individual locks.

The mobile model of the MANHATTAN serving module is equipped with 4 steering castors, 2 of which have brakes. The stationary model of the MANHATTAN serving module is equipped with 4 levelable feet.

The front panelling for the operator, customer and short sides are available in various colours and materials, and can therefore be adapted to the respective environment.

Various glass attachment shelves are available, with lighting and/or heat radiators as an option, for the optimum presentation of the food.

The MANHATTAN heated servery counter can be equipped with a fold-down tray slide on the serving, customer and short side.

The short sides can be provided with fold-down shelves.

MANHATTAN heated servery counters can be installed in various ways:

- Free-standing for food serving with service or self-service
- Back along the wall for self-service (operating elements on customer side)
- Back to back for self-service

To adapt to the room situation, the MANHATTAN heated servery counter can be combined with additional serving or expansion modules and connected at the aluminium corner profiles with module connectors.

Serving modules:

- MKA 3/MKA 4/MKU 3/MKU 4/MVK 4/MVS 4 cooled servery counter
- MNE 3/MNE 4/MNE 5/MNE V plain servery counter

Expansion modules:

- MKSS 4/MKS 4 cash register booth
- MAF 45/MAF 90, MIF 45/MIF 90, MA 45/MA 90, MI 45/ MI 90 corner modules
- MPP 3/MPP 4/MPP 5 pre-mix/post-mix modules
- MAN 3/MAN 4/MAN 5/MEN V servery/roll-in counter

### **Operation**

The unit can be loaded in the following two ways:

- Dry loading: Gastronorm containers are hung in the dry bain-marie wells
- Wet loading: Gastronorm containers are hung in the bain-marie wells filled with 4 litres of hot water

When using a support crossbar or two support crossbars crosswise, the following Gastronorm containers GN 1/2, GN 1/4, GN 2/3, GN 1/3, GN 1/6, GN 2/8 and GN 1/9 can be hung in a bain-marie well.

When using a support crossbar lengthwise, the following Gastronorm containers GN 2/4, GN 1/4 and GN 1/6 can be hung in the bain-marie well.

Each bain-marie well can be heated separately. Rotary knobs are used for continuous temperature adjustment ("10" is equal to a temperature of approx. +95 °C).

The heated compartments integrated depending on the unit model can be used to keep food hot in Gastronorm containers.

The compartments are heated together. A rotary knob is used for stepless temperature adjustment ("10" is equal to a temperature of approx. +80 °C)

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### **Unit model with lighting or heat radiators**

The heat radiators and lighting can be switched on and off via a push switch.

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**Unit models/design features**

Depending on the configuration, the MANHATTAN heated servery counter can be equipped with the following design features:

- Sturdy stainless-steel frame construction
- Four steering castors, two of which have castor brakes
- Stainless-steel feet, height-adjustable
- Stainless-steel skirting panels (only in conjunction with feet)
- Top surface made of stainless steel or various types of granite
- Installation compartment in underframe with drain valve
- Compartment open on operator side with support ledges for holding a middle shelf
- Stainless-steel middle shelf for open compartment (only MWA 4/ MWA 5)
- Compartments closed on operator side
- Lockable doors
- Convection-heated and insulated compartments
- 400 V electrical connection
- 230 V Schuko socket outlets in the panel
- 230 V Schuko socket outlet or 400 V CEE socket outlet in the installation compartment for the connection of additional modules
- Stainless-steel shelf on one or both short sides
- Fold-down tray slide made of stainless-steel tubing or of Resopal® on one or both long unit sides
- Fold-down tray slide made of stainless-steel tubing or Resopal® on one or both short sides
- Stainless-steel or Resopal® panelling
- Stainless-steel panel for aluminium corner profile, customer side and short side
- Module connectors for fixed connection of two units at aluminium corner profiles
- Stainless steel panel for module connector, customer side, only in connection with module attachment set
- One-level attachment shelf, pulled down to top surface on customer side, with or without lighting
- One-level attachment shelf, pulled down on customer side with pass-through, with or without lighting
- One-level attachment shelf, pulled down on both sides with pass-through, with or without lighting
- One-level attachment shelf, pulled down to top surface on customer side, with lighting and heat radiators
- Two-level attachment shelf, pulled down on customer side, at top and bottom: with pass-through, with or without lighting
- Two-level attachment shelf, pulled down on customer side, top: with pass-through and lighting, bottom: up to top surface, with lighting
- Two-level attachment shelf, pulled down on customer side, top: with pass-through and lighting, bottom: up to top surface, with lighting and heat radiators

## Safety

**General Information** The unit has been built using state-of-the-art technology. Accordingly, all the requirements necessary for safe operation have been fulfilled. Additional dangers do nevertheless exist when the unit is operating. The safety precautions and warnings in these operating instructions are there to help you protect yourself against these sources of danger.

### Safety precautions

Thoroughly read and observe the safety precautions in this chapter. The operator is responsible for the observance of the safety precautions in these operating instructions.

### Warnings

Observe the warnings with the danger symbol (warning triangle) in the text.

### Operating Instructions

These operating instructions must be read carefully before the initial use. The operator is responsible for ensuring that all users have read these instructions before using the unit. Keep these operating instructions in a location which is always accessible to operating personnel.

### Cleaning and maintenance

For cleaning and maintenance tasks, or to replace parts, disconnect the unit from the power supply. During the work to be performed, keep the mains and/or unit plug in a suitable place and protect it from moisture, damage and dirt.

### About this product **Application**

The unit may only be used for the applications specified. The operator is responsible for the appropriate and proper use of the unit.

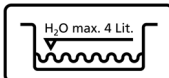
### Conditions of use

The unit is only to be operated under the appropriate environmental conditions. The users of the unit must be instructed in operation and they must have read and understood the operating instructions.


### Information labels

Observe the information labels on the unit. Replace illegible, damaged or missing labels immediately.

The unit has the following information labels attached:

Warning sign	Meaning – Mounting Location
	<p>"Max. water fill level" sticker on operator side at right above the installation compartment in the switch panel.</p>

**Unit model with heat radiators**

Warning sign	Meaning - Mounting Location
	"Hot surface warning" sticker in accordance with DIN 4844-2 on both long sides of the U-shaped light housing.

**⚠ Caution!****Damage to persons or property!**

If explosive materials or containers are stored in the unit and the unit is operated, this may cause an explosion and subsequent personal injury and property damage.

- Do not store any explosive materials, such as aerosols with flammable propellant, in this unit.

**Transport Upright transport position**

Transport the unit in an upright position only.

**Transporting with a truck or delivery van**

The unit is only to be transported in a truck or delivery van with a loading ramp. The loading ramp may not exceed an angle of inclination of 10°.

Secure against shifting of the unit. Just locking the castor brakes is insufficient transport security.

Secure the unit against vertical movement during transport.

Use padded locking bars.

**Unit model with attached parts**

When transporting with a truck or a delivery van, fold down the fold-down attachments, as otherwise they may be damaged during transport.

**Unit model with middle shelf**

When transporting with a truck or a delivery van, remove the middle shelf, as otherwise it can slide out of the unit.

**Assembly Location**

Never operate the unit next to equipment which develops large amounts of steam (e.g. dishwasher). The steam can cause moisture condensation on the unit.

When the unit is connected to the power, there is a danger of the moisture film causing a malfunction, a short-circuit or an electric shock.

**Mains connection**

The mains voltage and frequency listed on the rating plate must match the corresponding values of the socket outlet.

The unit may not be used if the insulation on the power cable or the mains plug is damaged.

Insert and remove mains plug only while unit is switched off, as otherwise the unit electrical system can be damaged. Connected external devices must also be switched off before disconnecting the mains plug.

To disconnect the unit, only pull on the mains plug housing.

#### **Electrical connection of several modules**

The overall connected load of 11 kW may not be exceeded when several modules are electrically connected.

#### **Commissioning Commissioning after a storage period**

When the unit is brought from a cold storage room into a warmer room with a correspondingly higher humidity, moisture contained in the room air condenses on the surface and the inside of the unit.

When the unit is connected to the power, there is a danger of the moisture film causing a malfunction, a short-circuit or an electric shock.

Do not operate the unit until it has reached room temperature.

#### **Operation General Information**

The user must know of the dangers involved with the unit and be able to assess them.

The unit may only be used by persons, whose physical, sensory or mental abilities are not subject to any relevant restrictions for operating the unit.

The unit is only to be used when it is in proper working order.

If damage is present, secure the unit against accidental use and have repairs carried out immediately by one of the authorised service agencies listed under Repairs.

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#### **Caution!**

##### **Possible impairment of food quality**

If a power failure, unit malfunctions or other interruptions during storage or regeneration occurs, the quality of the food located in the unit may be impaired.

- After reducing the core temperature, check whether the food quality has been impaired and dispose of food if necessary.

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#### **Edge protection on the glass attachment shelf**

##### **Unit model with glass attachment shelf**

The glass attachment shelf has been provided with a synthetic edge protection.

The edge protection may only be removed for cleaning. Removing the edge protection opens up the risk of the glass being broken by an impact of a hard object.

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**Unit model with heated compartments**

Avoid opening the unit doors unnecessarily when heating is active. Only open unit doors briefly for loading or removing Gastronorm containers.

Only load the heated compartments with covered, stainless-steel Gastronorm containers.

Keep a gap of at least 90 mm clear between the compartment and the underside of the bottom GN container pushed in.

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**Tension fractures caused by cold water in hot bain-marie wells**

When cold water is poured into hot bain-marie wells, the rapid change in temperature can cause microscopic tension fractures that can lead to corrosion. Before filling with cold water, allow the bain-marie wells to cool down, or fill the hot bain-marie well with hot water.

**Load-bearing capacities**

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**Unit model with glass attachment shelf**

Do not place objects on the glass attachment shelf.

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**Unit model with attached parts**

These attachments are designed for use with dishes and/or trays. Heavy objects, such as full Gastronorm containers, should not be placed on them. Sitting on the attachments is not permitted.

Permissible surface loading per attachment:

- Tray slide: 25 kg
  - Shelf: 25 kg
  - Middle shelf: 100 kg
- 

**Hot unit parts, objects and food**

The bain-marie wells, optionally available heated compartments and objects contained within them (e.g. Gastronorm containers) reach +95 °C during operation and can cause burns.

Protection (e.g. with protective gloves) must be used when handling hot objects.

The food which is temperature maintained can cause scalding.

**Hot surfaces due to heat radiators**

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**Unit model with heat radiators**

The protective screens and the outside of the heat radiators become hot during operation and can cause burns.

Only put heat radiators into operation when no temperature-sensitive containers and objects (especially made of synthetic) are located below. Otherwise there is a danger of damage or, in extreme cases, of fire.

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**Hygiene regulations**

Observe the corresponding regulations on foodstuffs and the properties of the food when serving and keeping food hot.

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## Castor brake

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### Unit model with castors

Always secure the unit from rolling away by setting the castor brakes. The unit can cause injuries and damage to property if allowed to roll away accidentally.

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### Change of location

Always disconnect the mains plug and remove objects from the bain-marie wells and placement surfaces before changing locations. Otherwise objects could slip off or out of the unit when changing locations.

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### Unit model with closed compartments

Hold unit doors closed while changing its location.

Before a change of location, remove all objects (e.g. Gastronorm containers) from the compartments.

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### Unit model with castors

If the unit is on a slanted surface, it must be secured against rolling away with further measures (e.g. wedges) in addition to locking the castor brakes.

The unit can be tilted to an angle of 10° when stationary before there is any danger of it toppling. Only slanted surfaces with an incline of less than 10° may be crossed.

The unit can swerve out to the side when being pushed on a slanted surface. Two people (one at each side of the unit) are required to move the unit over ramps or recesses.

To minimize the danger of damage to the castors, avoid overloading the castors:

- Do not move the unit when the castor brakes are locked
- Avoid impacts
- Do not traverse bumps or steps
- Do not traverse uneven floors

The unit is to be pushed only, never pulled.

Always push the unit with both hands on the top surface. Depending on the weight, you may not be able to apply the brakes quickly enough if you push it with just one hand.

Be careful not to jam your hands between the unit and walls or other objects (e.g. cabinets).

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## Shutting down **Unplugging the mains plug**

Insert and remove mains plug only while unit is switched off, as otherwise the unit electrical system can be damaged.

External devices connected to the unit socket outlets must also be switched off prior to plugging in or disconnecting the mains plug.

## Cleaning and care **Mains plug**

Unplug the mains plug before cleaning the unit. Water seeping into the unit can cause a short-circuit. This can result in malfunctions. In addition, there is also a danger of electric shock.

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### **Hygiene**

The provisions of the hygiene guidelines 93/43/EEC as well as your national hygiene regulations must be complied with.

### **Cleaning frequency**

Clean the unit after each use.

### **Cleaning methods**

Use only approved cleaning methods.

Do not use steam jet units, high-pressure cleaners, water sprayers or similar cleaning devices.

### **General information on cleaning agents**

Do not use metal parts for cleaning. Metal parts can damage the unit and/or lead to corrosion.

Do not use pointed or sharp objects for cleaning. They can damage the unit.

Do not use scouring agents. Scouring agents scratch the surface.

### **Cleaning agents for synthetic parts**

Do not use scouring agents. Scouring agents scratch the surface.

Do not use the following cleaning agents or cleaning agents containing the following substances (damage to material!):

- Ethyl alcohol, isopropyl alcohol and higher alcohols
- Acetone
- Cleaning benzene
- Turpentine
- Acetic ester

### **Hot unit parts, objects and food**

The bain-marie wells, optionally available heated compartments and the Gastronorm containers contained within them reach +95 °C during operation and can cause burns.

Allow the unit to cool for at least 20 minutes before it is cleaned.

### **Cleaning water**

Thoroughly dry the unit after cleaning.

A danger of slipping exists if cleaning water runs out during or after cleaning.

Completely wipe up cleaning water which runs out onto the floor.

## **Maintenance      Periodical electrical safety inspection**

At least once every six months, have a periodical electrical safety inspection carried out by a professional electrician in accordance with the DIN VDE 0701-0702 series of standards.

### **Connection cable and mains plug**

At least once every six months, check the connection cable and mains plug for mechanical damage and signs of excessive ageing in accordance with BGV A 3 or the corresponding national regulations.

## Castor brake

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### Unit model with castors

Regularly check the effectiveness of the castor brakes.

If locking is insufficient, have the defective castor(s) replaced immediately by one of the service agencies listed under Repairs.

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### Repairs **Authorised persons**

The unit may only be repaired by the following service points:

- In-house, by B.PRO-trained experts
- Externally, by B.PRO-trained customer service
- B.PRO Service

The warranty will be invalidated if the unit is repaired by anyone else or without being commissioned.

### Replacing components of unit electrical system

Components of the unit electrical system (e.g. switches, power cables, bulbs, heat radiators, etc.) may only be replaced by qualified personnel (e.g. an electrician) with parts of the same specifications.

### Standards and guidelines

Observe the applicable standards, guidelines and safety regulations.

The operator is responsible for compliance with the applicable standards, guidelines and safety regulations.

### Product marking

The unit is provided with a rating plate. The warranty is voided if the rating plate is removed.

## Transport

### Checking for/reporting on damage incurred during transportation

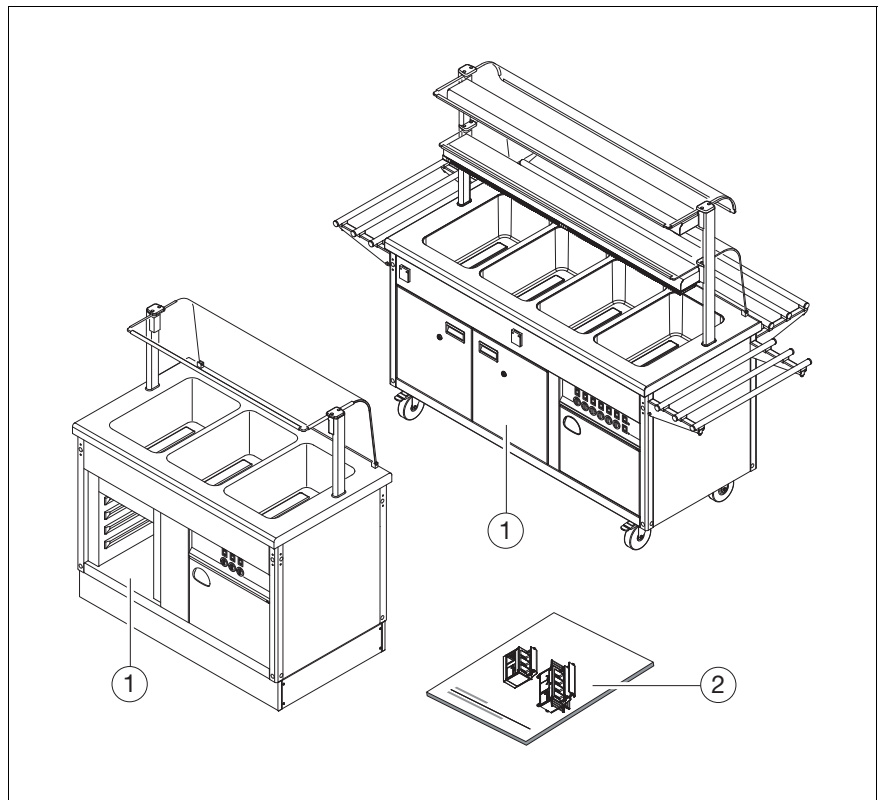
- ☞ It is imperative that the unit be checked immediately after delivery for damage incurred during transport (visual inspection).
- Document (description of defect) any damage incurred during transport on the waybill in the presence of the carrier.
- Have the carrier confirm the damage (signature).
- Retain the unit and notify B.PRO of the damage, enclosing the waybill.

– or –

Do not accept the unit and return it to B.PRO via the carrier.

- ☞ This procedure will ensure correct processing of claims. Transport damage reported later has to be proven correspondingly by the receiver of the unit.

### Scope of delivery



- (1) MANHATTAN heated servery counter
- (2) Operating Instructions

The exact scope of delivery and the unit model are shown in the delivery documentation.

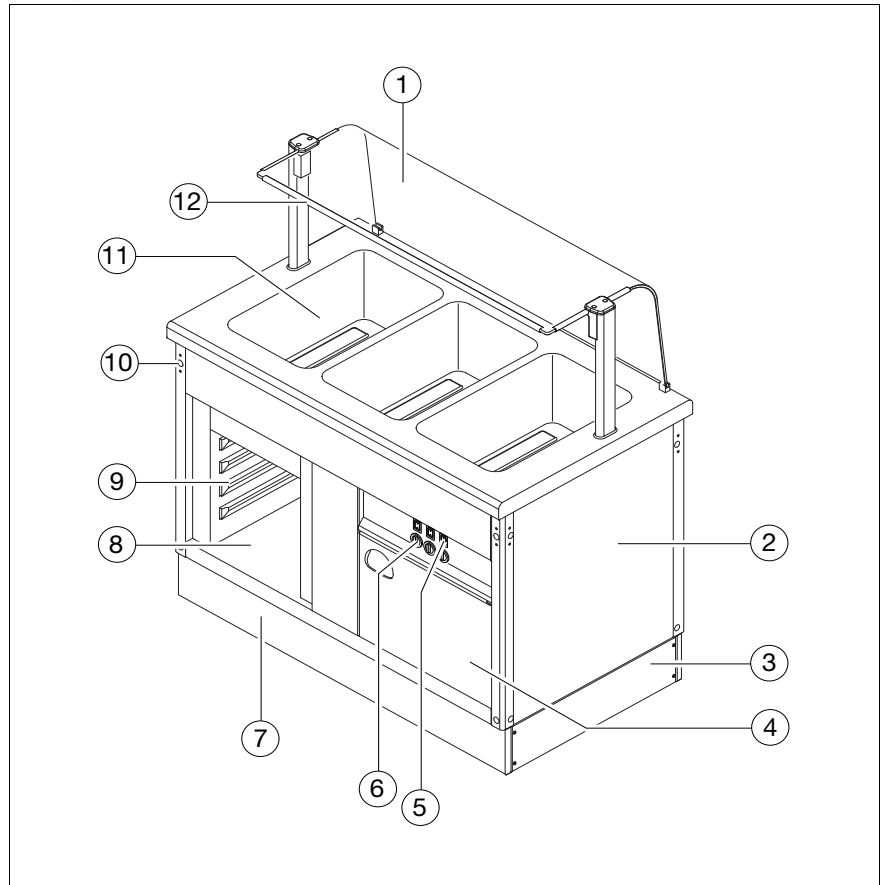
- Unpacking**
- ▶ Open the transport packaging at the places provided. Do not rip or cut it!
  - ▶ Check the scope of delivery.
  - ▶ Remove the protective films from the unit.

- Disposing of packaging material**
- ☞ Packaging materials are recyclable.
  - ▶ Recycle packaging materials in a proper, environmentally friendly manner in accordance with the respectively applicable legal requirements.

## Overview

### Unit Unit model with feet

Example illustration of MANHATTAN MWA3



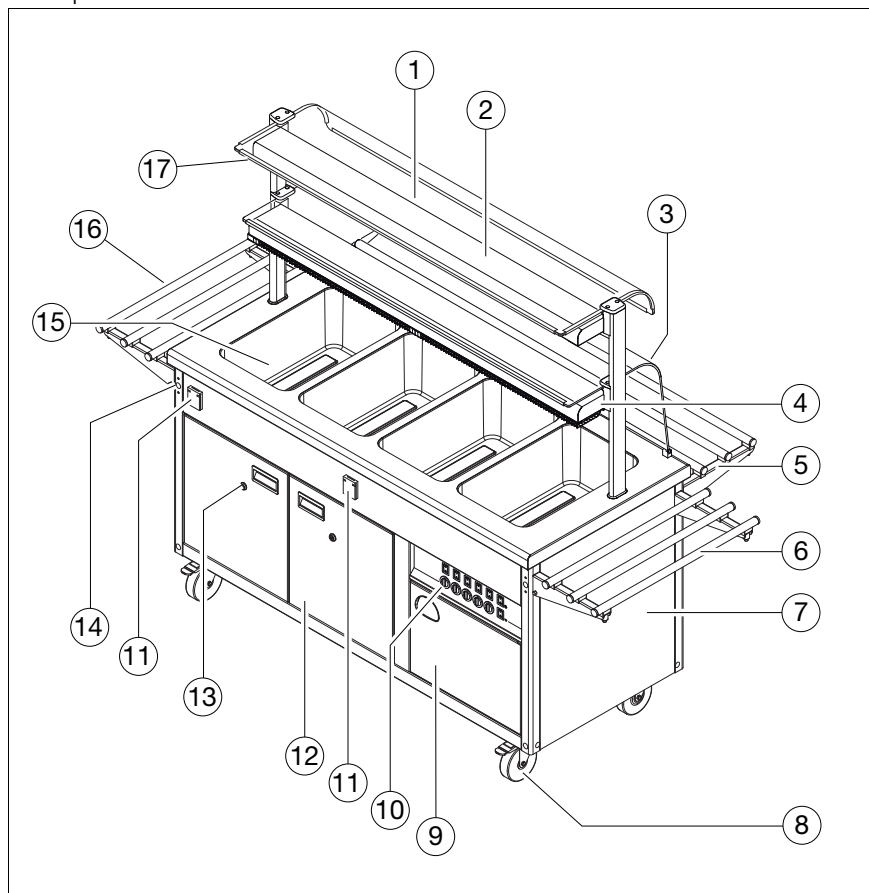
- (1) One-level attachment shelf, pulled down to top surface on customer side, without lighting
- (2) Panelling, short side
- (3) Skirting panel, short side
- (4) Installation compartment with drain valve, power cable and optional socket outlet for connecting additional modules
- (5) On/Off switch for heating of bain-marie well
- (6) Rotary knob for setting setpoint temperature of bain-marie well
- (7) Skirting panel, operator side
- (8) Open compartment
- (9) Support ledges
- (10) Holes for module connectors
- (11) Bain-marie wells

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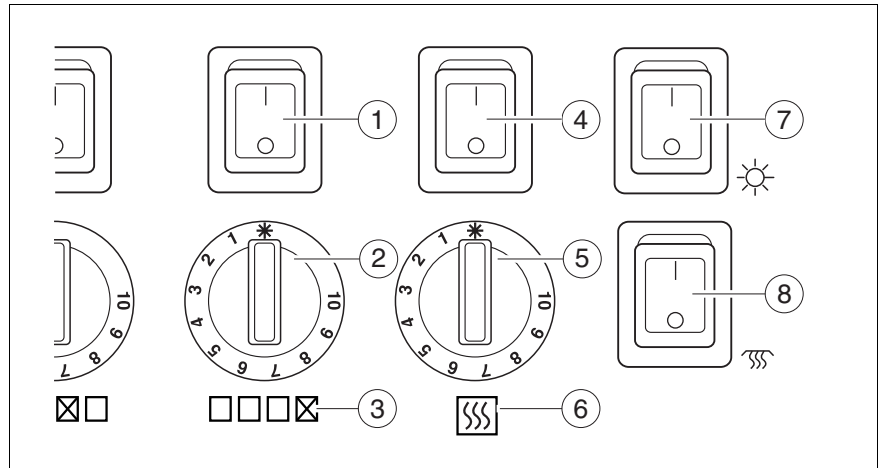
**Unit model with castors**

Example illustration of MANHATTAN MWA4.



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- (1) Upper level of two-level glass attachment shelf pulled down on customer side
  - (2) Light housing with lighting
  - (3) Upper level of two-level glass attachment shelf pulled down to top surface on customer side
  - (4) Light housing with lighting and ceramic heat radiators
  - (5) Fold-down tray slide of stainless-steel tubing on customer side
  - (6) Tray slide on short side made of stainless steel tubing, right-hand side
  - (7) Panelling, short side
  - (8) Steering castor with castor brake
  - (9) Installation compartment with drain valve, power cable and optional socket outlet for connecting additional modules
  - (10) Panel with On/Off switches and rotary knobs for adjusting setpoint temperature
  - (11) Socket outlet for connection of external devices
  - (12) Compartment door
  - (13) Lock
  - (14) Holes for module connectors
  - (15) Bain-marie wells
  - (16) Tray slide on short side made of stainless steel tubing, left-hand side
  - (17) Edge protection
- 
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**Operating modules (bain-marie wells, compartment, heat radiators, lighting)**



- (1) "Bain-marie well heater" On/Off switch with integrated operating indicator LED
- (2) Rotary knob for setting the setpoint temperature of the bain-marie well
- (3) Symbol of fourth bain-marie well
- (4) "Compartment heating" On/Off switch with integrated operating indicator LED (only unit model with heated compartments)
- (5) Rotary knob of heated compartment (only unit model with heated compartments)
- (6) Symbol of heated compartment
- (7) "Lighting" On/Off switch with integrated operating indicator LED (only unit model with lighting)
- (8) "Heat radiators" On/Off switch with integrated operating indicator LED (only unit model with heat radiators)

The desired setpoint temperature can be set steplessly for each individual bain-marie well with the rotary knob. The setting value "10" corresponds to a maximum setpoint temperature of approx. +95 °C.

**Unit model with heated compartments**

The desired setpoint temperature in the compartments can be set steplessly for all compartments together with the rotary knob. The setting value "10" corresponds to a maximum setpoint temperature of approx. +80 °C.

**Loading types** The bain-marie wells can be loaded in the following two ways:

**Dry loading with Gastronorm containers**

- Gastronorm containers are hung in the dry bain-marie wells.
- When filling with a small amount of food, we recommend preheating the bain-marie wells.

Procedure for dry loading:

↳ Section "Loading bain-marie well dry" on page 29.

**Wet loading with Gastronorm containers**

- Gastronorm containers are hung in the bain-marie wells filled with hot water up to the mark. Filling up to the mark is equivalent to the specified filling amount of 4 litres.
- When filling with a small amount of food, we recommend preheating the bain-marie wells.
- Advantages of wet loading:
  - Excellent heat transfer to the Gastronorm container(s) via hot steam
  - The water is a good heat reservoir.

Procedure for wet loading:

↳ Section "Loading bain-marie well wet" on page 31.

---

## Assembly

- Preparing assembly**
- ✓ Protective film removed from unit
  - ✓ Mains connection provided by customer matches values specified on rating plate
- Selecting location**
- ☞ To ensure the best possible temperature maintenance of the food, note the following points when selecting where to place the unit:
    - Operate the unit far away from equipment which develops large amounts of steam (e.g. dishwasher).
    - Sufficiently protect the unit from drafts.

---

**Positioning unit**

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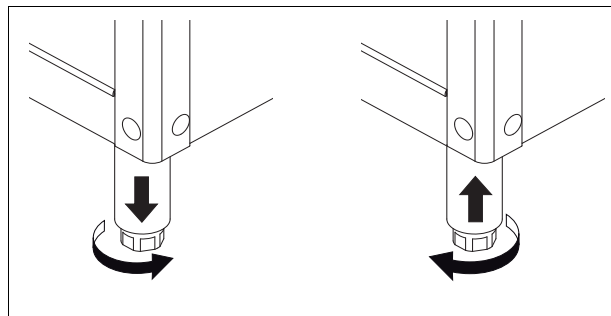
**Unit model with castors**

- Push the unit into its designated location and lock the castor brakes.
    - ☞ Section "Moving the unit to a new location" on page 35.
- 

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**Unit model with feet**

- Install the unit in the designated location.
- Adjust the module to the correct height by adjusting the feet and align it horizontally so that it stands securely and does not wobble.



**Connecting modules to each other**

**Mechanical coupling of the modules**

- i** Two modules can be connected to each other with module connectors at the aluminium corner profiles of the modules.

---

---

**Unit model with panels at the aluminium corner profiles**

- Remove the panel of the aluminium corner profiles before assembly.

- ✓ Optionally mounted stainless steel panels of aluminium corner profile removed
- ✓ Module to which other module is to be coupled is located at final location
- ✓ 6 mm Allen key

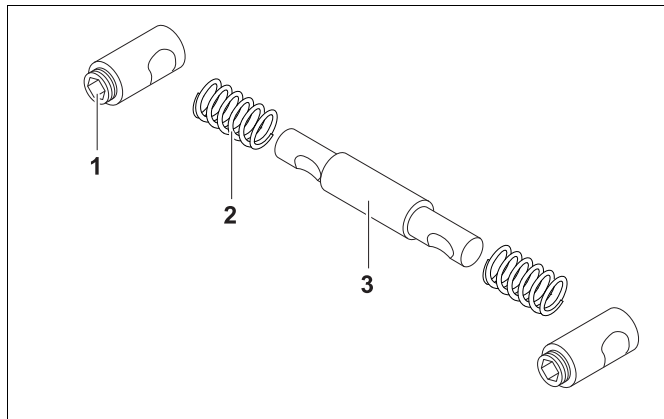
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**Unit model with castors**

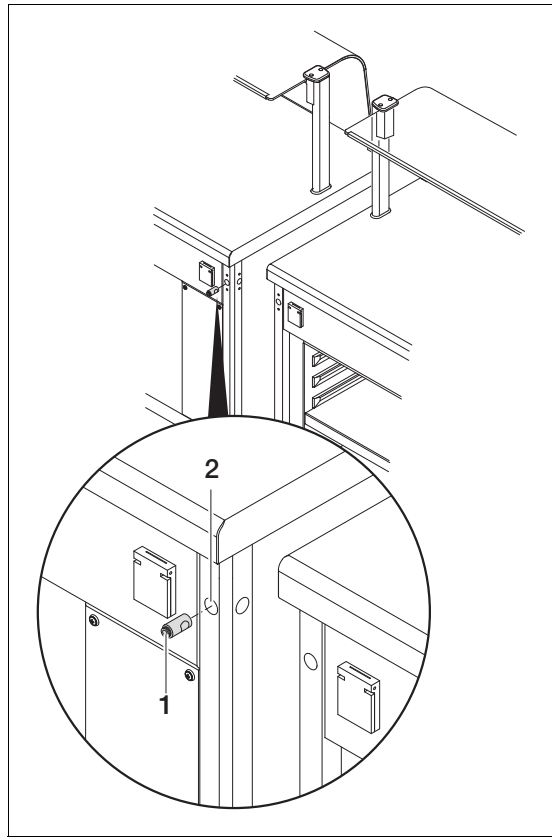
- ✓ Castor locks of module to which other module is to be coupled are locked

- ☞** Two serving modules are connected on the short sides at all four corners with the following module attachment elements:

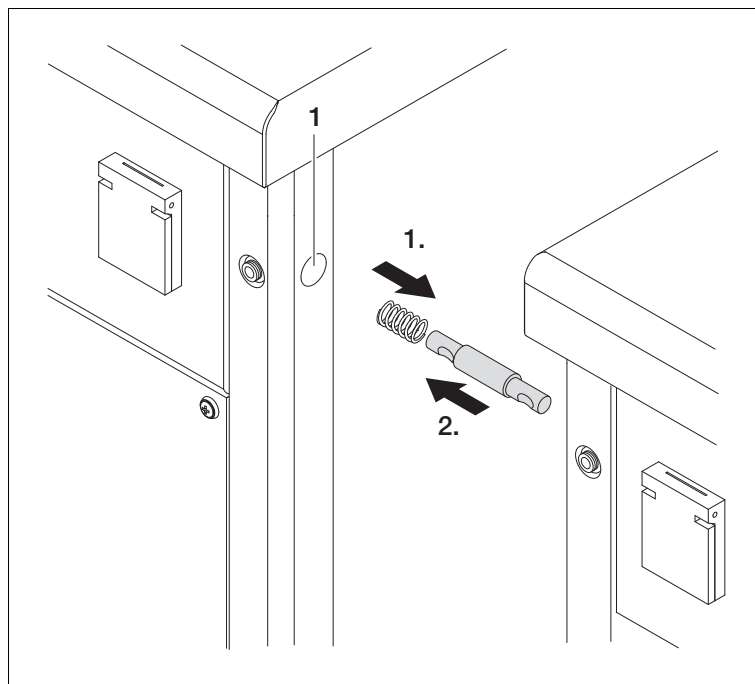


- 
- (1) Sleeve with Allen screw
  - (2) Spring
  - (3) Connecting pin
-

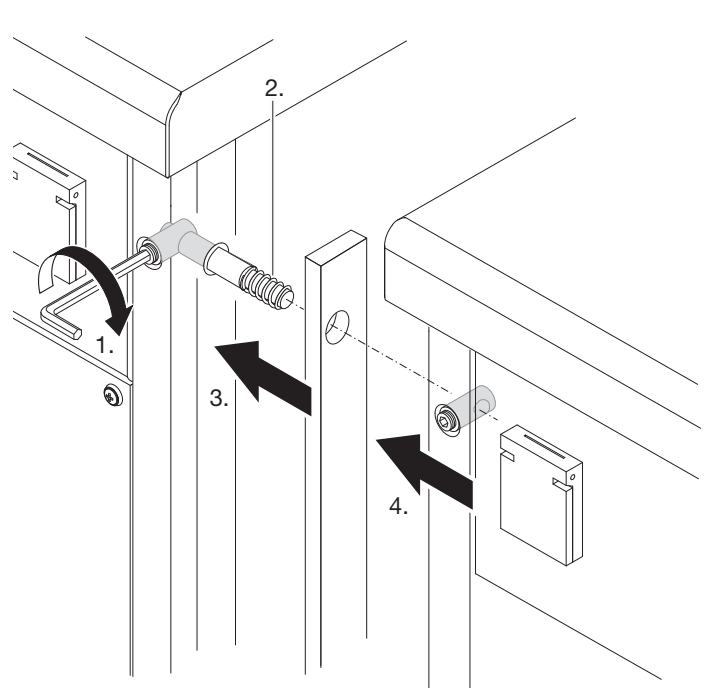
- Slide in one sleeve (1) each as far as possible through the holes for the module connectors (2) at the top and bottom in the long unit side of the module which is to be connected to.



- Slide the springs onto the connecting pins (1.).
- Push the connecting pins with the pushed-on springs through the holes in the aluminium corner profile on the short unit side (1) as far as possible into the sleeves previously pushed in (2.).



- Firmly tighten the Allen screws of the sleeves with an Allen key (6 mm) (1.). The connecting pins are fixed in place on the module to be coupled to.
- Slide the springs (2.) and module connecting strips (3.) onto the 4 mounted connecting pins (3.).
- Slide one sleeve each through the hole for the module connector into the long unit side of the module to be connected to as far as possible.
- Carefully push the module to be connected up to the module which is to be connected to until the 4 connecting pins are aligned with the holes in the aluminium corner profile in the short unit side.
- Push up the module to be connected (4.) until the connecting pins are guided as far as possible into the sleeves pushed in previously.



- Firmly tighten the Allen screws of the sleeves on the connected module with an Allen key (6 mm). The modules are now connected to each other.

#### Connecting unit Connecting unit to socket outlet

#### Caution!

#### Damage to the unit electrical system!

If the unit is not rated for the mains voltage or frequency which is available, the unit electrical system may suffer permanent damage.

- Before connecting, ensure that the mains voltage and frequency listed on the rating plate match the corresponding values of the mains socket outlet.

---



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 **Caution!**

**Material damage!**

If connected external units have not been switched off before plugging in or unplugging the mains plug, the unit electrical system and customer-supplied socket outlet may become damaged.

- Before connection, ensure that all connected external units are switched off.

 The mains connection cable is routed out of the unit on the underside of the unit.

- Plug the mains plug into the socket outlet.

The unit is ready for operation.

**Electrical connection of modules**


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**Unit model with socket outlet in installation compartment**

- i** Several modules can be electrically connected to each other via a socket outlet installed in the installation compartment so that only one electrical connection need be provided by the customer. The permissible overall connected load may not be exceeded when doing so.

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 **Caution!**

**Damage to the unit electrical system!**

The overall connected load may not be exceeded when several modules are interconnected.

- Check the overall connected load.
  -  Section "Electrical data" on page 51.
  - Disconnect the electrical connection of the modules when the permissible overall connected load is exceeded.
  - Insert the mains plug of the module to be connected into the socket outlet in the installation compartment of the module connected to the electrical connection provided by the customer.
- 

- First cleaning**
- i** After delivery of the module, initial cleaning of the unit must be carried out.
  - Make sure that all transport packing, protective films and adhesive tape are removed.
  - Clean the surfaces with suitable cleaning methods and cleaning agents.
    -  Section "Cleaning unit" on page 45.

---

## Commissioning

- Prerequisites for operation**
- ✓ Protective films removed
  - ✓ Unit has reached room temperature and is dry
  - ✓ The unit has no known defects or visible damage
  - ✓ Unit is in absolutely hygienic condition

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### Unit model with castors

- ✓ Castor brakes locked

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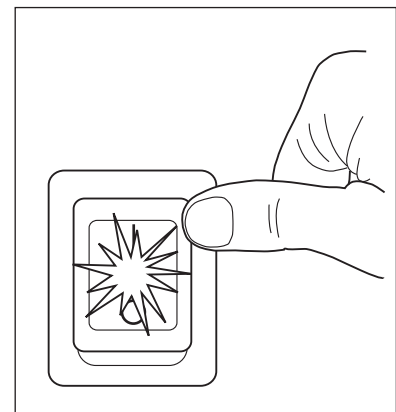
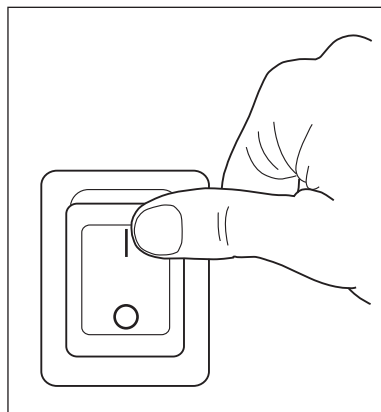
### Unit model with feet

- ✓ All feet are adjusted so that the unit stands securely and does not wobble

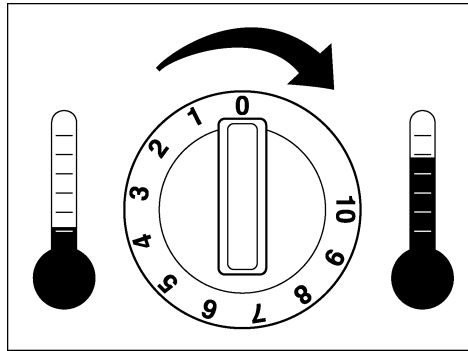
- Preparing for operation**
- Before switching on, ensure the bain-marie wells and the optional heated compartments are in an absolutely hygienic state.
  - Ensure that there are no heat-sensitive objects in the bain-marie wells or the optional compartments.

**Initial start-up Heating up empty unit for the first time**

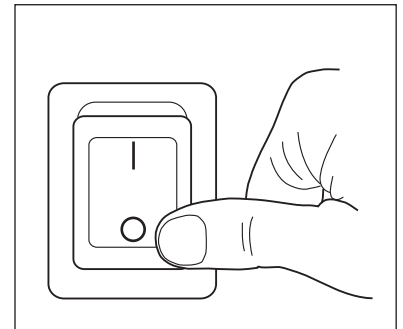
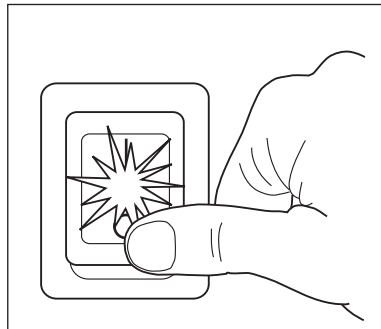
- ☞ During the initial start-up, the insulation material which becomes hot may cause an unpleasant odour. For this reason, B.PRO recommends heating the bain-marie wells and the optional heated compartments while empty for approx. two hours before initial use.
- Switch on the heaters of all bain-marie wells and the optional heated compartments in the underframe at the respective On/Off switch. The operation indicator LEDs in the On/Off switch of the bain-marie wells and the heated compartments light up.



- Set all rotary knobs to the highest level (10).



- Pre-heat all bain-marie wells and the optional heated compartments for approx. 2 hours.
- Switch off the heaters of all bain-marie wells and the optional heated compartments in the underframe at the respective On/Off switch. The operation indicator LEDs go out.



- Ventilate and clean the compartments.

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## Operation

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### Connecting external unit

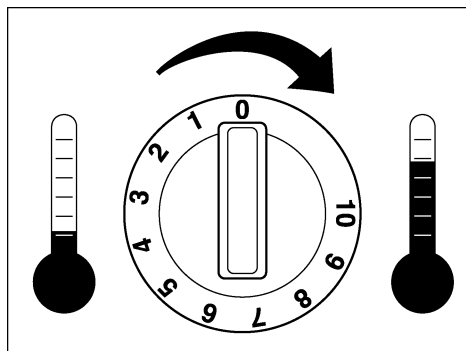
#### Unit model with socket outlet

- ☞ The maximum connected load of the socket outlets for the connection of external units is 3.5 kW.
    - ☞ Chapter "Technical data" on page 49.
  - ✓ Unit is installed with a firm stance
  - ✓ Unit connected to power supply
  - ✓ Voltage, mains frequency and power consumption of the external device(s) correspond to values specified in Technical Data
  - ✓ External unit is installed with firm stance
  - Insert the plug of the external unit in the socket outlet in the module panel.  
The external unit is now connected.
- 

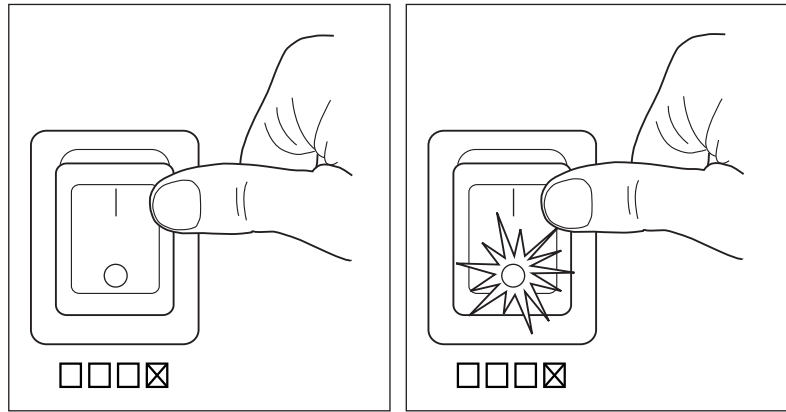
### Switching heating for bain-marie wells on or off and setting setpoint temperature

#### Switching on heating

- ☞ While heating, the "Bain-marie well heater" operation indicator LEDs display which wells are currently switched on.
- ✓ Unit connected to a socket outlet
- Set the rotary knob of the corresponding bain-marie well to the desired level.  
The setpoint temperature is set.

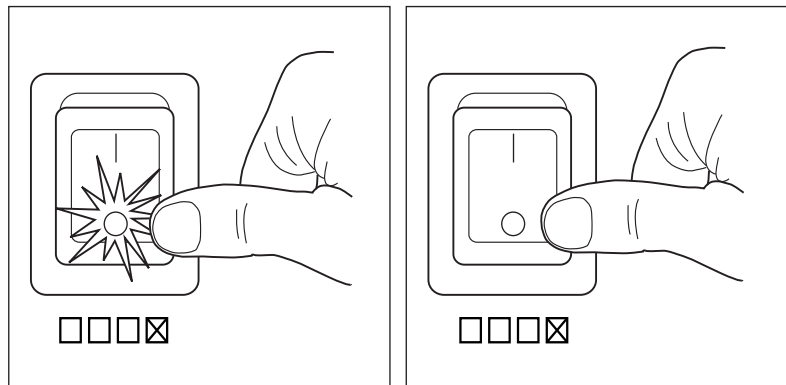


- Switch on the "Bain-marie well heater" On/Off switch of the bain-marie well.  
The operation indicator LED of the "Heating of bain-marie well" On/Off switch lights up.



**Switching off heating**

- Switch off the "Bain-marie well heater" On/Off switch of the desired bain-marie well.  
The operation indicator LED of the "Heating of bain-marie well" On/Off switch goes out.

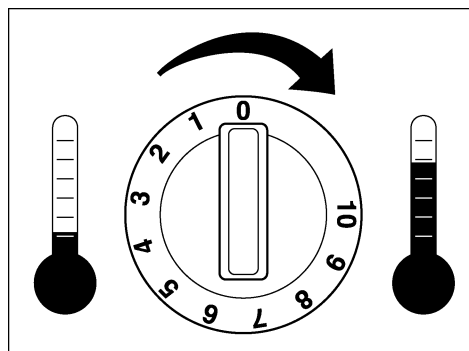


**Switching heating for compartments on or off and setting setpoint-temperature**

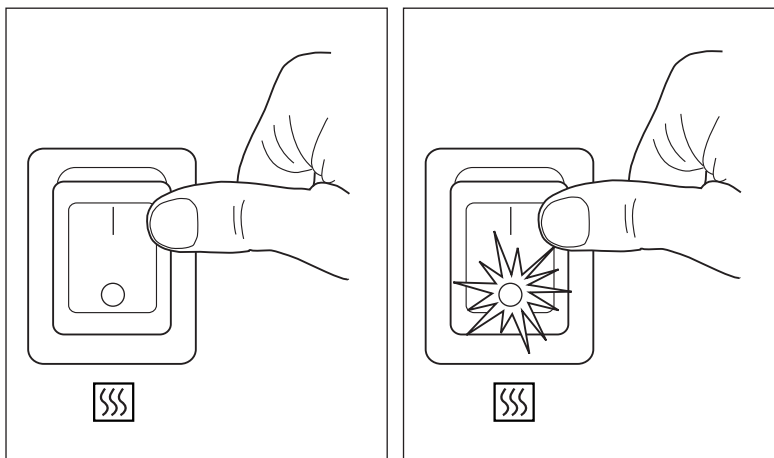
**Unit model with heated compartments**

**Switching on heating**

- ☞ While heating, the "Compartment heating" operation indicator LED shows whether the compartments are currently switched on.
- ☞ The two compartments are always heated together.
- ✓ Unit connected to a socket outlet
- Set the rotary knob for the compartments to the desired level.  
The setpoint temperature is set.

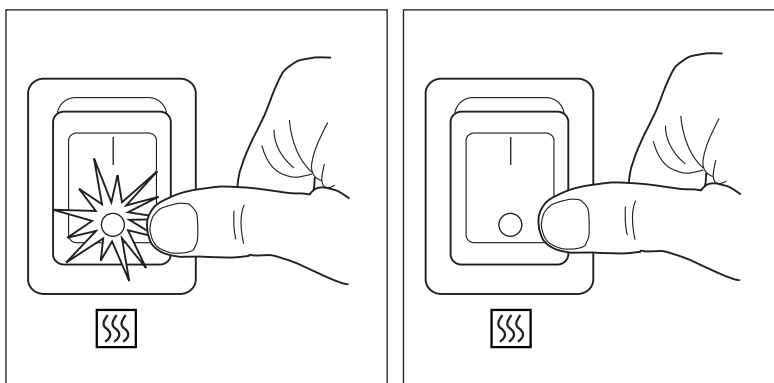


- Switch on the "Compartment heating" On/Off switch.  
The operation indicator LED of the "Compartment heating" On/Off switch lights up.



#### Switching off heating

- Switch off the "Compartment heating" On/Off switch.  
The "Compartment heating" operation indicator LED goes out.



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#### Switching the heat radiators on or off

##### Unit model with heat radiators

##### Switching on heat radiators

- i** A heat radiator is located above each bain-marie well which helps keep the food hot.
- ☞** While heating, the "Heat radiators" operation indicator LED shows whether the heat radiators are currently switched on.
- ✓** Unit connected to a socket outlet

---

**⚠ Warning!**
**Hot unit parts and objects below the heat radiators!**

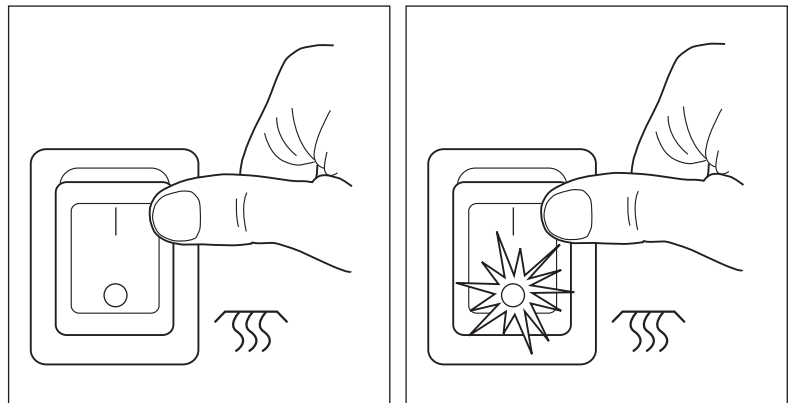
When the heat radiators are switched on, objects located under the radiators, the protective screens and the outside of the radiator housing become hot and can cause burns.

- Protection (e.g. with protective gloves) must be used when handling hot objects.
  - Remove lids from Gastronorm containers before switching on the heat radiators.
  - Do not touch the radiator housing.
- 

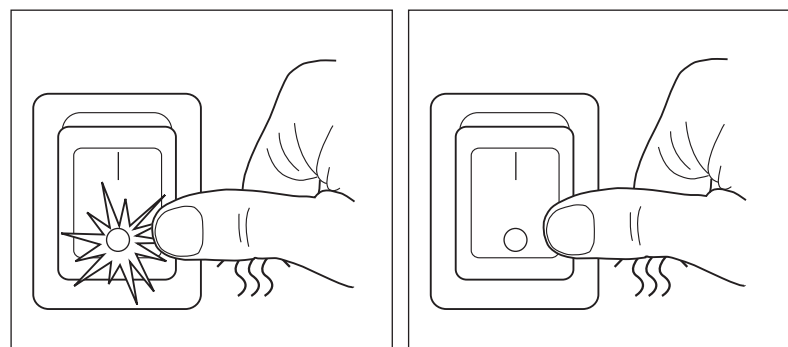
**⚠ Warning!**
**Temperature-sensitive objects!**

If temperature-sensitive containers and objects (especially made of synthetic) are located below switched-on heat radiators, there is a danger of damage or, in extreme cases, also a fire danger.

- Only put heat radiators into operation when no temperature-sensitive containers and objects (especially made of synthetic) are located below.
  - Switch on "Heat radiators" On/Off switch.  
The operation indicator LED of the "Heat radiators" On/Off switch lights up.
- 


**Switching off heat radiators**

- Switch off "Heat radiators" On/Off switch.  
The operation indicator LED of the "Heat radiators" On/Off switch goes out.



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**Switching lighting on or off**      **Unit model with lighting**

**Switching on lighting**

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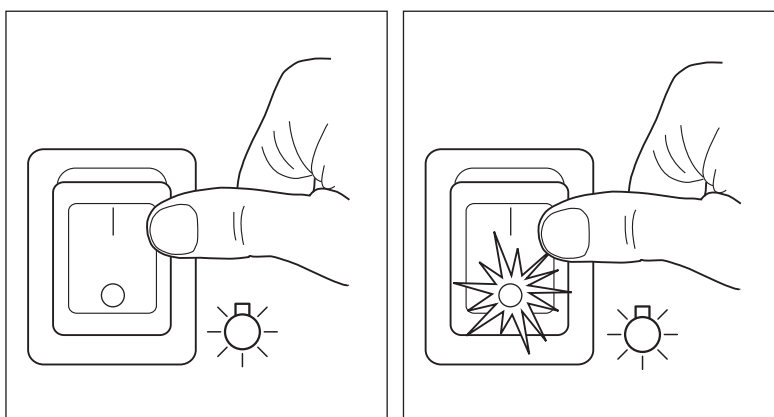
**⚠ Caution!**

**Danger of burns!**

The glass panes of the lighting become hot during operation. Contact with unprotected skin can result in burns.

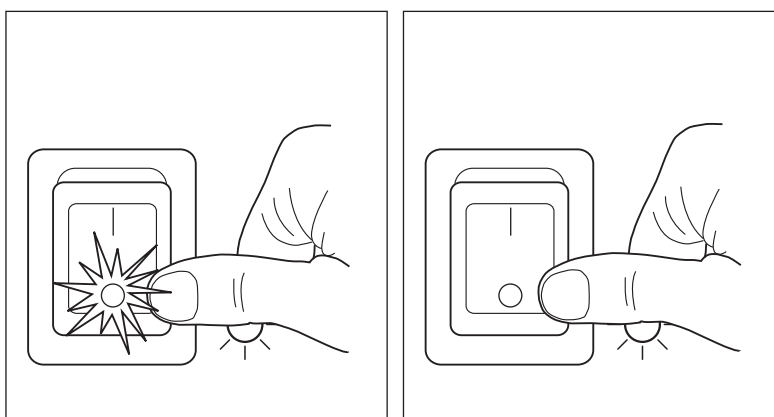
- Do not touch hot lighting with unprotected skin.
- 

- ✓ Unit connected to a socket outlet
- Switch on "Lighting" On/Off switch.  
The operation indicator LED of the "Lighting" On/Off switch lights up.



**Switching off lighting**

- Switch off "Lighting" On/Off switch.  
The operation indicator LED of the "Lighting" On/Off switch goes out.



- Loading bain-marie well dry**
- i** An explanation of the loading types can be found following the overview:
    - ↳ Section "Loading types" on page 16.
  - i** We recommend wet loading due to the better heat transfer to the Gastronorm containers.
  - ☞ B.PRO recommends loading with Gastronorm containers made of stainless steel (good heat distribution compared to synthetic Gastronorm containers). Gastronorm containers placed in the unit must be able to withstand a temperature of at least +100 °C. For example, polycarbonate Gastronorm containers may **not** be used.
  - ☞ We recommend using Gastronorm containers with universal bow handles, by which the containers can easily be lifted out of the unit.
  - ☞ Always cover Gastronorm containers filled with liquid food with a sealing lid.

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**⚠ Caution!**

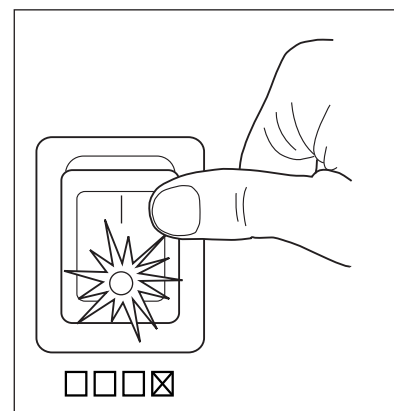
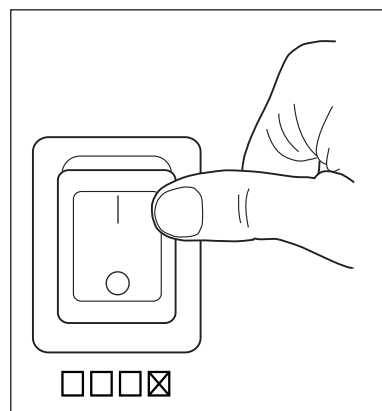
**Discolouration of bain-marie well!**

Due to the poor heat conductivity of air, extremely high temperatures primarily result at the bottom of the well, but also on the sides in case of dry loading of the bain-marie well.

---

**Preheating bain-marie wells**

- ☞ Preheating is not necessary if a large portion of the bain-marie well is loaded with hot food. If only a small amount of hot food is placed in the well, we recommend preheating the unit for 30 minutes before loading it with food.
- ✓ Bain-marie wells are cleaned and dry
- ✓ Bain-marie well not yet loaded
- ✓ Unit connected to a socket outlet
- Ensure that no heat-sensitive objects are located in the bain-marie well.
- Switch on the desired bain-marie well with the respective "Bain-marie well heater" On/Off switch.  
The operation indicator LED of the "Heating of bain-marie well" On/Off switch lights up.



- ▶ Change the setpoint temperature on the rotary knob if necessary.
  - ↳ Section "Switching heating for bain-marie wells on or off and setting setpoint temperature" on page 24.

The bain-marie well is heated to the set setpoint temperature

- ▶ Preheat bain-marie well for approx. 30 minutes.

#### Load bain-marie well with Gastronorm containers

- ✓ Bain-marie well preheated if necessary (with small amount of food)
- ✓ Gastronorm containers and food are heated
- ✓ Gastronorm containers in good condition (e.g. edge not deformed or sharp)
- ✓ Gastronorm containers covered (containers with liquid food provided with sealing lids)

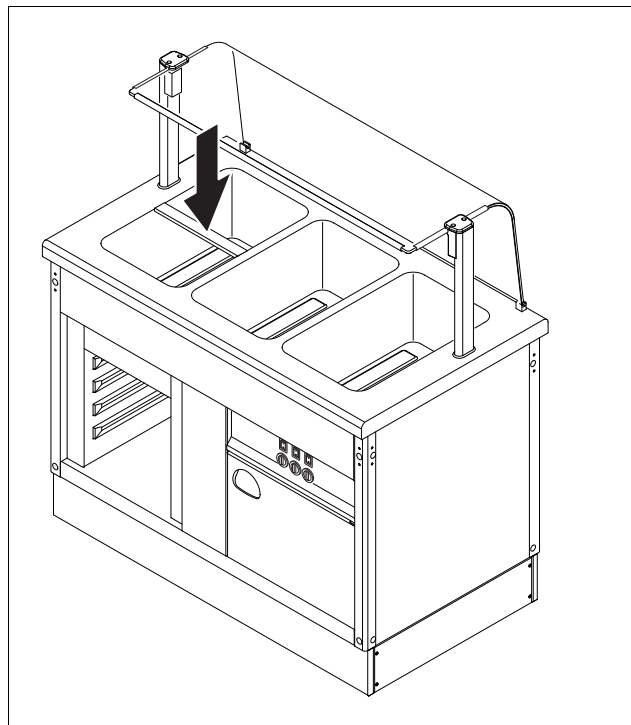
↳ Each bain-marie well can be divided lengthwise by a support crossbar and crosswise with one or two support crossbars.

↳ When using a support crossbar or two support crossbars crosswise, the following Gastronorm containers GN 1/2, GN 1/4, GN 2/3, GN 1/3, GN 1/6, GN 2/8 and GN 1/9 can be hung in the bain-marie wells. When using a support crossbar lengthwise, the following Gastronorm containers GN 2/4, GN 1/4 and GN 1/6 can be hung in the bain-marie wells. Support crossbars can be ordered as accessories from B.PRO.

↳ Section "Accessories" on page 53.

↳ Loading example with a support crossbar in the crosswise direction: one GN 1/2 Gastronorm container and two GN 1/4 Gastronorm containers.

- ▶ Insert the corresponding support crossbar or crossbars as is necessary.



- ▶ Hang Gastronorm containers in the bain-marie wells.

**Loading bain-marie well wet** **i** An explanation of the loading types can be found following the overview:  
 ↳ Section "Loading types" on page 16.

↳ B.PRO recommends loading with Gastronorm containers made of stainless steel (good heat distribution compared to synthetic Gastronorm containers). Gastronorm containers placed in the unit must be able to withstand a temperature of at least +100 °C. For example, polycarbonate Gastronorm containers may **not** be used.

↳ We recommend using Gastronorm containers with universal bow handles, by which the containers can easily be lifted out of the unit.

↳ Always cover Gastronorm containers filled with liquid food with a sealing lid.

### Filling bain-marie wells with water

**i** With wet loading, the bain-marie wells are filled with water up to the marking before preheating and/or loading (corresponds to the specified filling amount of 4 litres).

↳ To reduce the preheating time or to forgo preheating altogether, B.PRO recommends filling the bain-marie wells with **hot** water.

- ✓ Bain-marie wells cleaned and empty
- ✓ Drain cock of bain-marie wells is closed

### **Caution!**

#### **Tension fractures caused by cold water in hot bain-marie wells!**

When cold water is poured into hot bain-marie wells, the rapid change in temperature can cause microscopic tension fractures that can lead to corrosion.

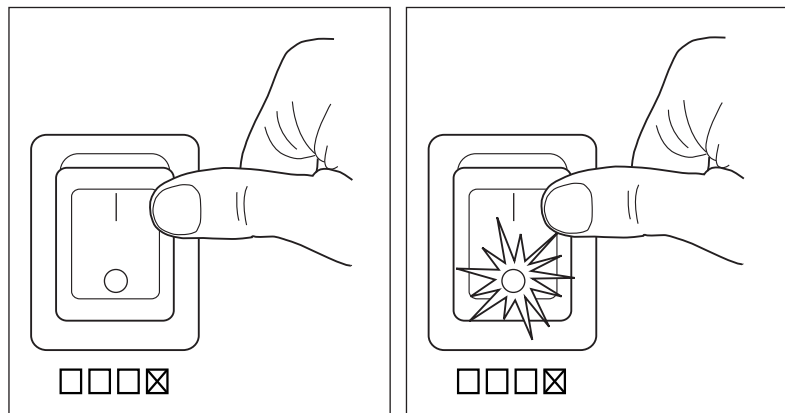
- Before filling with cold water, allow bain-marie wells to cool down, or fill the hot bain-marie wells with hot water.
- Fill the bain-marie wells used up to the marking with hot water. The specified filling amount is 4 litres.

### Preheating bain-marie wells

↳ Preheating is not necessary if a large portion of the bain-marie well is loaded with hot food. If the well is only filled with a small amount of hot food, B.PRO recommends preheating the unit before loading it with food. The bain-marie wells filled with 4 litres of water have heated up to +70 °C after a preheating time of approx. 30 minutes.

- ✓ Bain-marie wells being used are filled with 4 litres (specified filling amount) of hot water
- ✓ Bain-marie well not yet loaded
- ✓ Unit connected to a socket outlet
- Ensure that no heat-sensitive objects are located in the bain-marie well.

- Switch on the desired bain-marie well with the respective "Bain-marie well heater" On/Off switch.  
The operation indicator LED of the "Heating of bain-marie well" On/Off switch lights up.

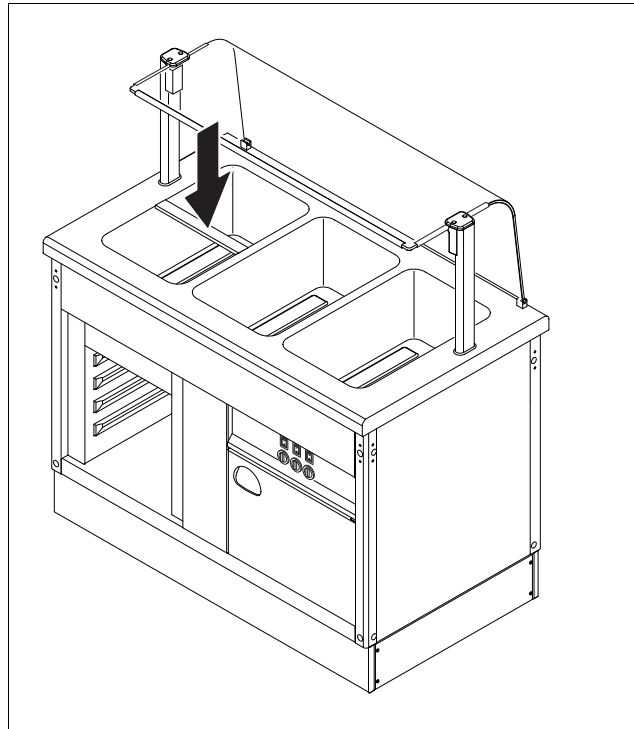


- Change the setpoint temperature on the rotary knob if necessary.
  - ↳ Section "Switching heating for bain-marie wells on or off and setting setpoint temperature" on page 24.The bain-marie well is heated to the set setpoint temperature
- Preheat bain-marie well for approx. 30 minutes.

#### Load bain-marie well with Gastronorm containers

- ✓ Bain-marie wells being used are filled with 4 litres (specified filling amount) of hot water each
- ✓ Bain-marie well preheated if necessary (with small amount of food)
- ✓ Gastronorm containers and food are heated
- ✓ Gastronorm containers in good condition (e.g. edge not deformed or sharp)
- ✓ Gastronorm containers covered (containers with liquid food provided with sealing lids)
- ↳ Each bain-marie well can be divided lengthwise by a support crossbar and crosswise with one or two support crossbars.
- ↳ When using a support crossbar or two support crossbars crosswise, the following Gastronorm containers GN 1/2, GN 1/4, GN 2/3, GN 1/3, GN 1/6, GN 2/8 and GN 1/9 can be hung in the bain-marie wells. When using a support crossbar lengthwise, the following Gastronorm containers GN 2/4, GN 1/4 and GN 1/6 can be hung in the bain-marie wells. Support crossbars can be ordered as accessories from B.PRO (for order number see B.PRO price list).
- ↳ Loading example with a support crossbar in the crosswise direction: one GN 1/2 Gastronorm container and two GN 1/4 Gastronorm containers.

- ▶ Insert the corresponding support crossbar or crossbars as is necessary.



- ▶ Hang Gastronorm containers in the bain-marie wells.

**Preheating and loading compartment(s)**

**Unit model with heated compartments**

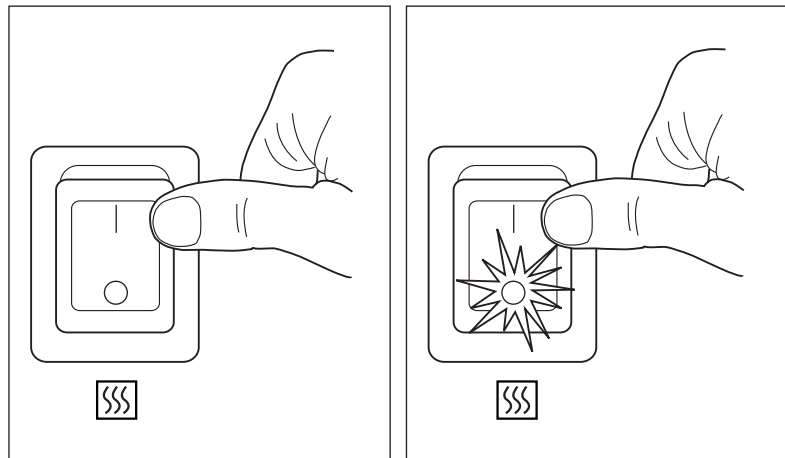
- i** The heated compartments are used for the temporary storage of hot food in Gastronorm containers until the food is served.

☞ If the compartments are to be used for maintaining the temperature of food, they must be preheated for at least 60 minutes before they can be loaded with food.

**Preheating compartments**

- ✓ Compartments not yet loaded
- ✓ Cabinet doors closed
- ✓ Unit connected to a socket outlet
- ▶ Ensure that no objects which are sensitive to heat are located inside the unit.

- ▶ Switch on heating for compartments with "Compartment heater" On/Off switch.  
The operation indicator LED of the "Compartment heating" On/Off switch lights up.



- ▶ Change the setpoint temperature on the rotary knob if necessary.
  - ↳ Section "Switching heating for compartments on or off and setting setpoint-temperature" on page 25.
- ▶ Preheat the compartments for at least 60 minutes.

#### Loading compartment(s)

- ✓ If the compartments are to be used to maintain the temperature of food:  
Compartments preheated for at least 60 minutes
- ✓ Food in Gastronorm containers is covered with lids

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### **Caution!**

#### Overheating of convection heating

An interruption of the air flow of the convection heating can result in a failure of the heating.

- ▶ Keep a gap of at least 90 mm clear between the bottom of the compartment and the underside of the bottom GN container pushed in (maximum depth of GN container in bottom support ledge: 65 mm)
- 
- ▶ Open doors of compartments.
  - ▶ Slide Gastronorm containers into compartments.
  - ▶ Close cabinet doors.
- 

#### Keeping food hot

- ↳ Observe the corresponding regulations on foodstuffs and the properties of the food when keeping food hot. We generally advise against storing food in the unit for longer periods.
- ↳ When food is not being removed, ensure that the Gastronorm containers are closed, i.e. with their lids.
- ▶ Change the setpoint temperature/s if necessary.
  - ↳ Section "Switching heating for bain-marie wells on or off and setting setpoint temperature" on page 24.

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### Unit model with heat radiators

- i** The heat radiators support temperature maintenance of food.
  - Switch on heat radiators if necessary.
    - ↳ Section "Switching the heat radiators on or off" on page 26.
- 

### Removing food

#### **Warning!**

##### **Bain-marie wells become hot!**

While maintaining temperature, the bain-marie wells and the Gastronorm containers or objects contained within become hot and can cause burns.

- Only handle hot parts with protection (e.g. with protective gloves).
  - Use U-handles of the Gastronorm containers.
- 

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### Unit model with heated compartments

#### **Warning!**

##### **Hot compartments!**

When maintaining the temperature of food, the compartments and the Gastronorm containers or other objects contained in them can become hot and cause burns.

- Only handle hot parts with protection (e.g. with protective gloves).
  - Use U-handles of the Gastronorm containers.
- 

#### **Warning!**

##### **Hot liquid food!**

Hot liquid food can splash out from the edge of the Gastronorm container and cause scalding.

- Always cover the Gastronorm containers with sealing lids.
- Keep the Gastronorm containers horizontal and avoid jerky movements.
- Remove lids of Gastronorm containers.
- Remove food from Gastronorm containers.

- ↳ The unit must be cleaned thoroughly after use.
  - ↳ Chapter "Cleaning and care" on page 42.
- 

### Moving the unit to a new location

- ✓ All electrical consumers switched off
  - ✓ No external devices connected
  - Unplug the mains plug.
    - ↳ Chapter "Shutting down" on page 39.
  - Ensure that no objects are located in the bain-marie wells or on the placement surfaces.
- 

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### Unit model with attached parts

- Fold the fold-down attachments downward.
  - ↳ Section "Folding the attachment downwards." on page 38.
-

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### Unit model with castors

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#### **Caution!**

##### **Be careful not to pinch your foot!**

The foot can be pinched and injured when the castor brakes are released and locked.

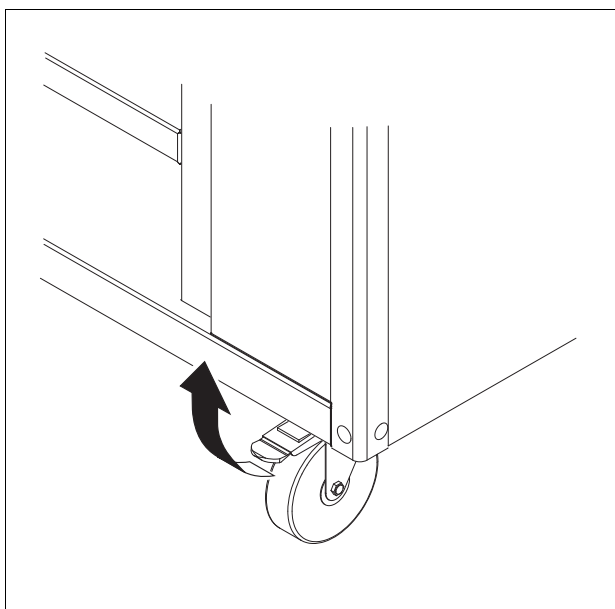
- Be careful not to put your foot between the castor brakes and the castor or unit panelling.
- 
- 

#### **Warning!**

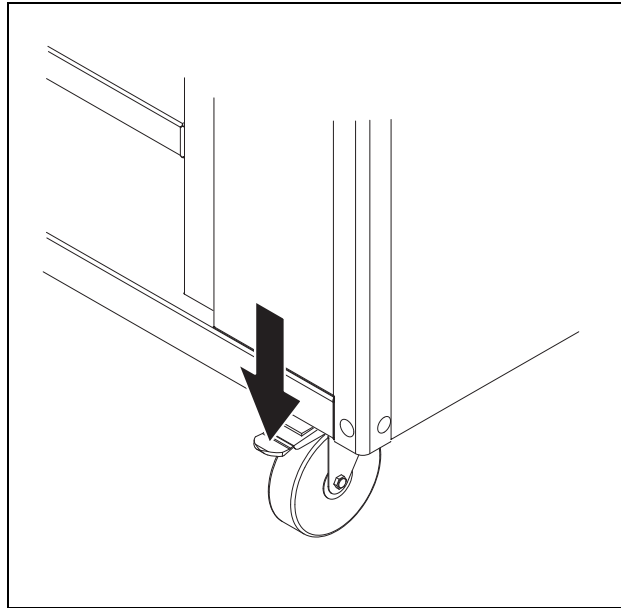
##### **Hands can be pinched!**

When pushing the unit, extremities can get caught between the module and a wall or other objects.

- Push the unit so that your hands are a sufficient distance from the wall or other objects and cannot be crushed.
  - Release the castor brakes.
- 
- 



- Using two hands, carefully push the unit to its new location.
- Lock the castor brakes.




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#### Unit model with feet

- Transport the unit to the new location with suitable means of transport (e.g. lift truck).
- 

Traversing ramps, recesses,  
slanted surfaces

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#### Unit model with castors

- ☞ All information and conditions for moving the unit to a new location on a level surface are also valid for the traversing of ramps, recesses and slanted surfaces.
  - ✓ Two people
- 

#### **Warning!**

##### **The unit can swerve to the side!**

The unit can suddenly swerve on a slanted surface.

- Push the unit over slanted surfaces with at least 2 people (one at each short side of the unit).
- 

#### **Warning!**

##### **Insufficient holding effect of castor brakes!**

The holding effect of the castor brakes may not be sufficient on ramps. The unit can start to move and cause injuries.

- When parking the unit on a ramp, lock the castor brakes and also secure it against rolling away (e.g. with wedges).
-

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**⚠ Warning!**

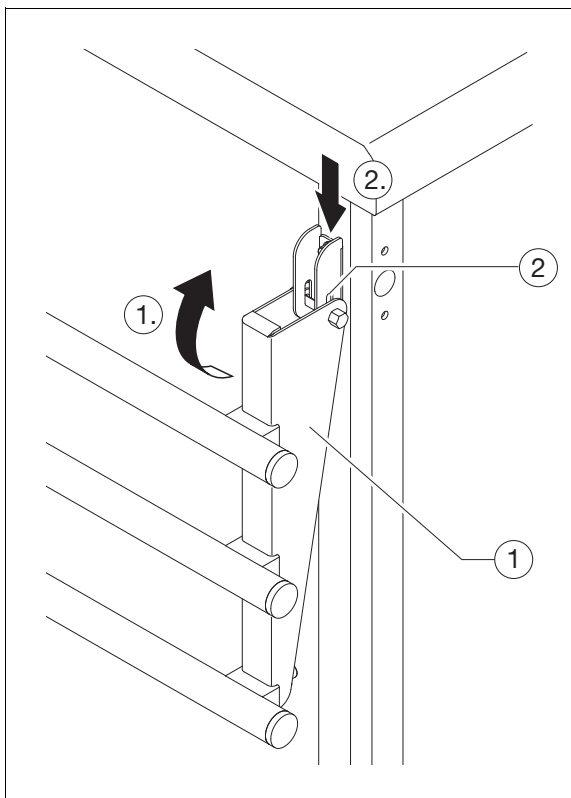
**The unit can tip!**

The unit can tip over when traversing a slanted surface.

- ▶ Never move the unit across a surface (e.g. ramp) with an incline greater than 10°.
  - ▶ First check whether the unit can be safely pushed over the ramp, recess or slanted surface.
  - ▶ Carefully push the unit over the ramp, recess or slanted surface with 2 people (one at each end of the unit).
- 

**Folding up attachment**

- ▶ Fold up the attachment (1.) up to the stop (1.).
- ▶ Lower the attachment (2.) in the oblong hole (2.).
- ▶ Ensure that the holder is engaged in both locks. Correct locking if necessary.



**Folding the attachment downwards.**

- ▶ Raise the attachment in the oblong hole until the lock of the holder has released.
- ▶ Fold the attachment downward and allow it to slide downward in the oblong hole of the holder.

## Shutting down

- Shutting down unit**
- ✓ Unit connected to a socket outlet
  - Switch off all connected electrical consumers.
  - Unplug the mains plug.
  - Fold the attachments downwards.

## Help in the event of problems

Operation indicator LEDs do not light up – no mains voltage in the unit

Cause	Action
Mains plug is unplugged or not plugged in properly.	<ul style="list-style-type: none"> <li>■ Plug the mains plug into the socket outlet and ensure proper seating.</li> </ul>
Power cable is damaged; e.g. a wire is broken (can also occur without external damage).	<ul style="list-style-type: none"> <li>■ Have power cable replaced by a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>
Customer-accessible fuse (household fuse) is defective.	<ul style="list-style-type: none"> <li>■ Check the customer-accessible fuse and have it replaced if necessary.</li> </ul>
Unit electrical system is defective.	<ul style="list-style-type: none"> <li>■ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>

The "Bain-marie well heater" and "Heat radiators" operation indicator LEDs light up but the food temperature is not adequately maintained

Cause	Action
Setpoint temperature is set too low.	<ul style="list-style-type: none"> <li>■ Set a higher setpoint temperature.</li> <li>↳ Section "Switching heating for bain-marie wells on or off and setting setpoint temperature" on page 24.</li> </ul>
The unit is exposed to a (strong) draft.	<ul style="list-style-type: none"> <li>■ Eliminate cause(s) of draft or remove unit from draft.</li> </ul>
Unit electrical system is defective.	<ul style="list-style-type: none"> <li>■ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>

The "Compartment heater" operation indicator LED lights up, but the food is not kept sufficiently hot

### Unit model with heated compartments

Cause	Action
Setpoint temperature is set too low.	<ul style="list-style-type: none"> <li>■ Set a higher setpoint temperature</li> <li>↳ Section "Switching heating for compartments on or off and setting setpoint-temperature" on page 25.</li> </ul>
Unit electrical system is defective.	<ul style="list-style-type: none"> <li>■ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>

"Heat radiators" operation indicator LEDs light up, but the food temperature is not adequately maintained

**Unit model with heat radiators**

Cause	Action
Unit is exposed to a (strong) draught.	<ul style="list-style-type: none"> <li>▶ Eliminate the cause(s) of the draft or remove the unit from the draft.</li> </ul>
Defective heat radiators.	<ul style="list-style-type: none"> <li>▶ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>
Unit electrical system is defective.	<ul style="list-style-type: none"> <li>▶ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>

"Lighting" operating indicator LEDs lights up, but lighting does not light up

**Unit model with lighting**

Cause	Action
Bulb defective.	<ul style="list-style-type: none"> <li>▶ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>
Lighting transformer defective.	<ul style="list-style-type: none"> <li>▶ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>
Unit electrical system is defective.	<ul style="list-style-type: none"> <li>▶ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>

Corrosion of stainless-steel parts

Cause	Action
Incorrect handling/care.	<ul style="list-style-type: none"> <li>▶ Remove areas of corrosion.</li> <li>↳ Section "Removing areas of corrosion on stainless steel" on page 45.</li> <li>▶ Ensure proper handling/care.</li> </ul>

The unit has external damage

Cause	Action
Damage during transport, change of location or other external influences.	<ul style="list-style-type: none"> <li>▶ Shut down unit.</li> <li>↳ Chapter "Shutting down" on page 39.</li> <li>▶ Secure the unit from being started up accidentally.</li> <li>▶ Notify a facility authorised to carry out repairs.</li> <li>↳ Chapter "Repairs" on page 47.</li> </ul>

## Cleaning and care

### Stainless steel Resistance to corrosion

The corrosion resistance of stainless steel is based on the presence of a so-called passive layer on the material surface.

Damage to the passive layer caused by mechanical influences is automatically repaired when a sufficient amount of oxygen is present at the material surface.

Injuries to the passive layer caused by (oxygen-consuming) chemical substances will damage the material. Treatment with oxidising acids can counteract this damage.

To maintain the corrosion resistance, observe the following information on cleaning and care.

**Cleaning frequency** The unit must be thoroughly cleaned after each use.

**Cleaning methods** The prescribed cleaning method for routine daily cleaning is to wipe down the unit with a damp cloth.

Persistent soiling may be removed with a brush (synthetic or natural bristles).

☞ Do not use steam jet units, high-pressure cleaners, water sprayers or similar cleaning devices.

☞ Do not use pointed or sharp objects for cleaning.

### Cleaning agents Stainless-steel surfaces

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#### **Caution!**

##### **Material damage!**

Contact of stainless steel with the following substances can cause corrosion:

– Concentrated acids, halogens (chlorides, bromides, iodides) and their salts or spices

– Acid vapours which, for example, develop when laying tiles

– Contact with other metal

– Contact with iron (e.g. steel wool, chips from lines, water containing iron).

Corrosion can also result under lime, grease, starch and protein layers due to a lack of air circulation.

■ Avoid contact with concentrated acids, halogens and their salts, spices, other metal, iron or substances containing iron. Wipe with a cloth rinsed in clean water if necessary.

■ Do not damage the surface of stainless steel, especially not with other metals.

■ Regularly remove lime, fat, starch and protein coatings by cleaning.

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The following cleaning agents may be used:

- Commercial cleaning agents in aqueous solution
- Soft cleaning cloth
- B.PRO microfibre cleaning cloth (use with water only)

Cleaning agents for heavily soiled stainless-steel surfaces:

- Commercially available stainless steel cleaning agents, e.g. B.PRO POLISH
- Surfaces made of stainless steel must be kept clean, dry and open to the air at all times.

### Synthetic surfaces

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#### **Caution!**

#### **Material damage!**

Stainless steel cleaning and scouring agents scratch the surface. The following cleaning agents or cleaning agents with the following ingredients will also damage the surface:

- Ethyl alcohol, isopropyl alcohol or higher alcohols
- Acetone
- Cleaning benzene
- Turpentine
- Acetic ester
- Do not use stainless steel cleaning or scouring agents.
- Never use cleaning agents containing solvents.

The following cleaning agents may be used:

- Commercial cleaning agents in aqueous solution
- Soft cleaning cloth
- B.PRO microfibre cleaning cloth (use with water only)

### Natural stone top surface


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#### **Unit model with natural stone top surface**

Information on cleaning natural stone top surfaces is contained in the included care instructions for natural stone surfaces.

 See separate care instructions for natural stone.

### **Draining water from the bain-marie wells**

-  All bain-marie wells are connected to a common drain in the installation compartment. Water no longer required can be drained off via the drain valve in the installation compartment.
- ✓ Collection container (e.g. Gastronorm container or bucket) with a capacity of at least 4 litres available for each bain-marie well

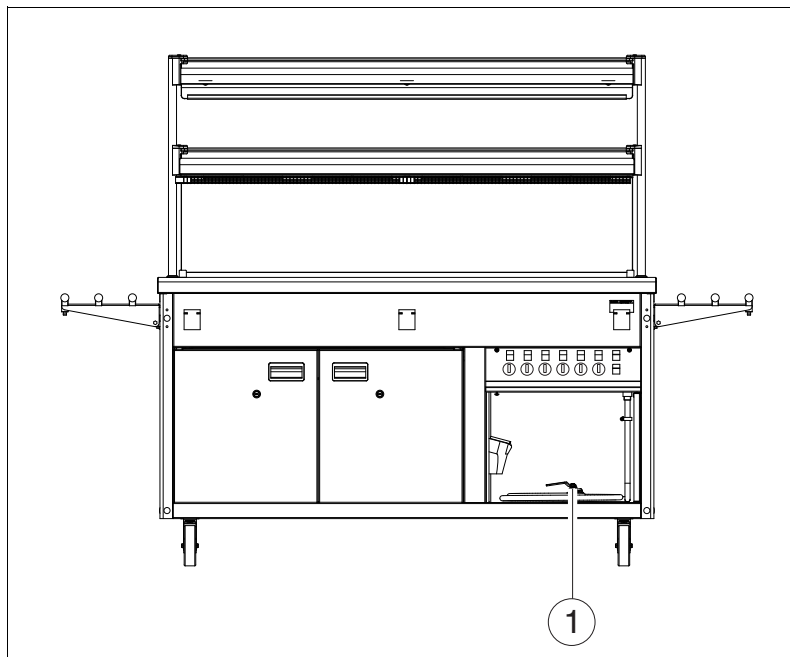
#### **Caution!**

#### **Hot water!**

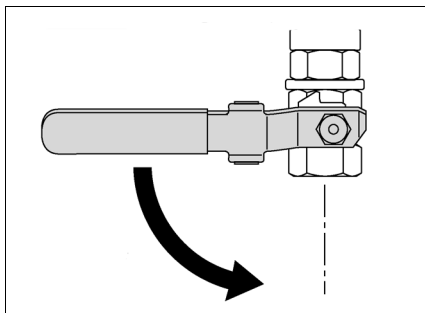
When wet loading, hot water is present in the bain-marie well. When the hot water is drained, danger of scalding is present.

- Allow water to cool down before draining off or wear suitable protective clothing (e.g. protective gloves).

- ▶ Hold the drain hose with the drain valve (1) over the catch container (e.g. Gastronorm container or bucket).

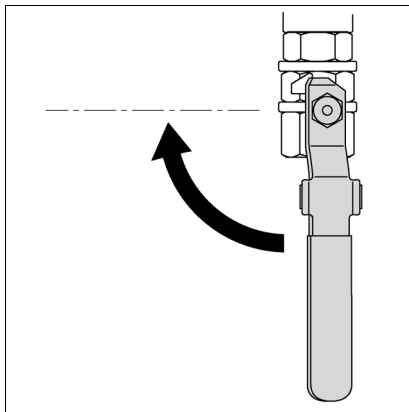


- ▶ To open the drain valve, turn the hand lever 90° anticlockwise.



The drain valve is opened and the water runs off.

- ▶ To close the drain valve, turn the hand lever 90° clockwise.



The drain valve is closed.

- ▶ Clean the bain-marie wells and rub them dry.

- Cleaning unit**
- ✓ The unit is switched off
  - ✓ Hot unit parts are cooled down

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 **Caution!**

**Danger of slipping!**

A danger of slipping exists if cleaning water runs out during or after cleaning.

- Completely wipe up water which has run out onto the floor.
- 
- Clean the unit with the cleaning methods and cleaning agents described above.
  - After using a stainless steel cleaning agent, thoroughly wipe with a damp cloth rinsed in clean water and rub dry.


**Removing areas of corrosion on stainless steel**

**New areas of corrosion**

- Ensure that the mains plug is unplugged.
- Remove areas of corrosion with a scouring agent or fine sandpaper.

**Older/heavier corrosion areas**

**i** The cleaning measures described here for older and more severe areas of corrosion are recommendations of the German industry association for home, heating and kitchen technology (HKI).

 The cleaning measures for older and more severe areas of corrosion may only be carried out by trained personnel in compliance with the existing regulations.

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 **Warning!**

**Caustic substances!**

The acids used for removing areas of corrosion can cause injuries and also caustic damage to objects (e.g. clothing). Contact with the eyes can cause irreparable impairment of sight. In the worst case, total loss of sight could result.

- Wear protective clothing (protective eyewear, protective gloves etc.).
  - Persons not involved in cleaning must be kept at a distance.
- 
- Ensure that the mains plug is unplugged.
  - Remove areas of corrosion with 2–3 % oxalic acid.
  - Use 10 % nitric acid if cleaning with oxalic acid is unsuccessful.

## Maintenance

### Having unit regularly maintained

- ☞ B.PRO recommends having regular maintenance performed on the unit by appropriately trained experts. Regular maintenance prevents failure of the unit, extends its operating life and contributes to general value retention.
- ▶ Having unit regularly maintained by appropriately trained experts.

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### Checking castor brakes

#### Unit model with castors

- ☞ The castor brakes must be checked for effectiveness every time the unit is moved to a new location.
- ▶ Lock the castor brakes.
- ▶ Try to move the unit (do not use force!).
- ▶ If the effectiveness of the brakes is not sufficient, have the defective castor(s) replaced immediately by one of the following:
  - In-house, by B.PRO-trained experts
  - Externally, by B.PRO-trained customer service
  - B.PROService

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### Having periodical electrical safety inspection carried out

- ▶ At least once every six months, have a periodical electrical safety inspection carried out by a professional electrician in accordance with the DIN VDE 0701–0702 series of standards.

### Checking connection cable and power plug

- ▶ At least once every six months, check the connection cable and mains plug for mechanical damage and signs of excessive ageing in accordance with BGV A 3 or the corresponding national regulations.

## Repairs

### Authorised persons

☞ Repairs may only be carried out by the following authorised service points:

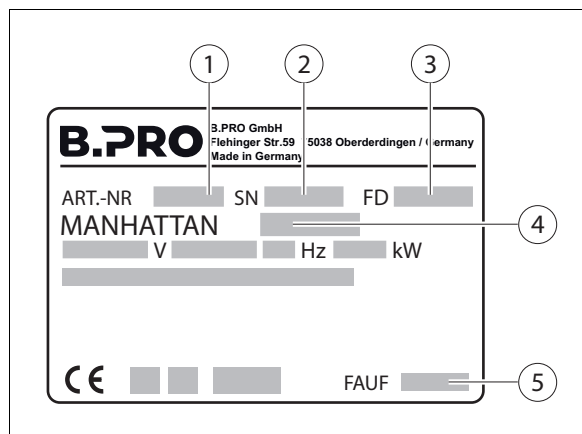
- In-house, by B.PRO-trained experts
- Externally, by B.PRO-trained customer service
- B.PRO Service

### Description of problem

In addition to an exact description of the defect, B.PRO Service requires the following information from the rating plate:

- Article number
- Model
- Serial number
- Date of manufacture
- Production order number (optional)

The rating plate is located on the inside of the installation compartment door.



- (1) Article number
- (2) Serial number
- (3) Date of manufacture
- (4) Model
- (5) Production order number (optional)

### Replacing components

☞ Defective components, including the power cable, may only be replaced by the following service points:

- In-house, by B.PRO-trained experts
- External, by B.PRO-trained customer service
- B.PRO Service

**Spare parts** The following information is required when ordering spare parts:

- Designation of spare part
- Article number
- Date of manufacture of the unit
- Quantity
- ↳ See the Service Information System on the Internet (www.bpro-solutions.com).

**Address** B.PRO GmbH  
Flehinger Straße 59  
75038 Oberderdingen  
Phone +49 (0)7045 44 - 81416  
Fax +49 (0)7045 44 - 81508  
Email service@bpro-solutions.com  
Internet www.bpro-solutions.com

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## Disposal

### Disposing of the unit



**i** When disposing of old electrical or electronic appliances via regular council refuse, a potential danger for the environment and for health may occur due to specific contents of the appliances.

The unit should therefore never be disposed of via normal municipal waste disposal but must be separated and disposed of by the waste collection for electrical appliances (e.g. a specialised disposal plant). To indicate this situation, the unit is marked with this symbol in accordance with DIN EN 50419, Marking of electrical and electronic devices in accordance with Article 11(2) Article 11(2) of Directive 2002/96/EG (WEEE). If necessary, other special national regulations governing disposal must also be observed.

- Render the unit and door locks unusable prior to disposal (e.g. by cutting off the mains plug).
- Transport the unit to a disposal point for electrical appliances (e.g. specialist disposal firm).
- ↳ This product may not be disposed of with other commercial waste.
- ↳ Further information on disposal is available from the dealer or from B.PRO Service.
- ↳ Section "Address" on page 48.

## Technical data

- i** Depending on the model, a unit subject to these operating instructions may also have different technical data (electrical and technical refrigeration information, dimensions). The binding information is provided on the rating plate or the specific order documents or drawings.

### General data Dimensions (approx. without attachments and glass attachment shelf)

Model	Length in mm	Width in mm	Height in mm
MANHATTAN MWA 3	1200	700	900
MANHATTAN MWA 4	1550	700	900
MANHATTAN MWA 5	1900	700	900

### Changes in dimensions caused by accessories (approx.)

Model	Length (mm)	Width (mm)	Height (mm)
Tray slide/shelf folded down		+70	
Tray slide folded up		+290	
Shelf folded up	+500		
One-level glass attachment shelf			+410
Two-level glass attachment shelf			+680

### Examples:

MWA 3 with two shelves:  $1200 + 500 + 500 = 2200$  long

MWA 3/4/5 with tray slide on customer side:  $700 + 290 = 990$  wide

MWA 3/4/5 with two-level glass attachment shelf:  $900 + 680 = 1380$  high

### Capacity

Model	Capacity Bain-marie wells
MANHATTAN MWA 3	3 GN 1/1-200
MANHATTAN MWA 4	4 GN 1/1-200
MANHATTAN MWA 5	5 GN 1/1-200

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**Unit model with closed compartments**

Model	Capacity per compartment
MANHATTAN MWA 3	4 GN 1/1-65
MANHATTAN MWA 4	8 GN 1/1-65
MANHATTAN MWA 5	12 GN 1/1-65

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**Weights**

The weight is dependent on the unit model. The following table provides an overview of the approx. weights of individual modules without attachments and without a attachment shelf. The exact weight is contained in the delivery documentation.

Model	Approx. empty weight (kg)	
	Top surface Stainless steel	Top surface Natural stone
MANHATTAN MWA 3	95	160
MANHATTAN MWA 4	115	180
MANHATTAN MWA 5	150	200

**Maximum permissible total weight**

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**Unit model with castors**

The maximum permissible total weight is 400 kg

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**Unit model with feet**

The maximum permissible total weight is 450 kg

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**Load-bearing capacity of accessories (approx.)**

Component/accessory part	Permitted area load in kg
Tray slide	25
Shelf	25
Glass attachment shelf	Do not place objects on the glass attachment shelf.

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**Unit model with open compartment**

Component/accessory part	Surface load (kg)
Middle shelf	50

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**Temperature control range**

**Bain-marie well**                      **+30 °C to +95 °C, continuously adjustable**

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**Unit model with heated compartments**

**Compartments:**                      **+30 °C to +80 °C, continuously adjustable**

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**Electrical data**      **Connected loads**

- ☞ The exact connected load of the module is dependent on the configuration and is specified on the rating plate. The rating plate is located near the power supply cable to the unit.
- ☞ The overall connected load may not be exceeded when several modules are connected to each other. When the permissible overall connected load is exceeded, an additional electrical connection must be provided by customer.

Unit	Connected Voltage	Power (max.)
<b>Heated servery counters</b>		
MANHATTAN MWA 3/MWA 4/MWA 5	400 VAC 3/N/PE	11 kW

Unit	Power (max.)
<b>Socket outlets and peripheral units</b>	
230 V Schuko socket outlet	3.5 kW*
400 V CEE socket outlet	11 kW*
Ceramic heat radiators	250 W (per light)
Halogen lights	20 W (per light)

\* Observe maximum permissible overall connected load

**Protection type**

IP X4

**Environment Environmental conditions – operation**

Temperature: +15 °C to +32 °C  
 Relative humidity: without condensation

**Environmental conditions – storage, transport**

Temperature: -10 °C to +40 °C  
 Relative humidity: without condensation

**Emissions**

The workplace-specific noise level of the unit is less than 70 dB(A).

**Materials**

Shelf, unit body: stainless steel  
 Top surface: stainless steel or natural stone  
 Skirting panel,  
 panel of corner profile: stainless steel  
 Tray slide,  
 front panelling: stainless steel or Resopal®  
 Corner profile, stand  
 Attachment shelf: aluminium  
 Attachment shelf: float glass

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**Lighting Unit model with lighting**

Bulb: socket GU4/12 V/ 20 W  
 3 x per level (MANHATTAN MNE 3/MAN 3)  
 4 x per level (MANHATTAN MNE 4/MAN 4)  
 5 x per level (MANHATTAN MNE 5/MAN 5)

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**Ceramic heat radiators Unit model with heat radiators**

Ceramic heat radiators: 230 V/250 W  
 3 x 250 W (MANHATTAN MAN 3)  
 4 x 250 W (MANHATTAN MAN 4)  
 5 x 250 W (MANHATTAN MAN 5)

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**Heated compartment in underframe** Connected load: 1,000 W

**Bain-marie wells** Connected load: 700 W

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## Ordering information

<b>MANHATTAN MWA 3 heated servery counter</b>	Article number:	566 609, 566 610
<b>MANHATTAN MWA 4 heated servery counter</b>	Article number:	566 611, 566 612, 566 613
<b>MANHATTAN MWA 5 heated servery counter</b>	Article number:	566 614, 566 615, 566 616
<b>Operating Instructions</b>	Document number:	154 615

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## Accessories

<b>Gastronorm container</b>	Article numbers:	<a href="#">↪</a> B.PRO price list
<b>Support crossbars</b>	Article numbers:	<a href="#">↪</a> B.PRO price list
<b>B.PRO microfibre cleaning cloth</b>	Article number:	126 999
<b>DeepClean Stainless Steel cleaning and care agent</b>	Article number:	511 895
<b>MANHATTAN expansion module</b>	Article numbers:	<a href="#">↪</a> B.PRO price list

## Standards

DIN 18865-1: Equipment for commercial kitchens - food distribution equipment - Part 1: Dimensions, requirements, testing.

DIN 18865-3: Equipment for commercial kitchens - food distribution equipment - Part 2: Heated servery counters:

DIN 18865-4: Equipment for commercial kitchens - food distribution equipment - Part 4: Top shelves heated or unheated.

DIN 18865-5: Equipment for commercial kitchens - food distribution equipment - Part 5: Tray slides.

DIN 18865-9: Equipment for commercial kitchens - food distribution equipment - Part 9: Equipment-insides in basic and hygiene types.

DIN EN 60335-1: Household and similar electrical appliances – Safety – Part 1: General requirements.

DIN EN 60335-2-49: Household and similar electrical appliances - Safety – Part 2-49: Particular requirements for commercial electric appliances for keeping food and crockery hot.

DIN EN 60529: Degrees of protection provided by housing (IP code).

BGV A3 (VBG 4): Accident prevention regulation: electrical facilities and devices.

DGUV regulation 110-003: -Working in kitchens.

### CE Designation



The unit is in compliance with the following regulations:

2006/95/EC: "Directive of the European Parliament and of the Council on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits"

2004/108/EC: "Directive of the European Parliament and of the Council for the alignment of legal provisions of the member states concerning electromagnetic compatibility".



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