

# TRAY TRANSPORT TROLLEYS

TTW 16/20/24/30 EN/GN,  
TTW 24 EN DZE, TTW 24 GN DZG,  
TTW 16/20/32/40 U, TTW 32/40 U PK,  
TTW 16/20/24/30 EN/GN PK,  
TTW 24 EN PK DZE, TTW 24 GN PK DZG,  
TTW 16/20 - 115 EZE/EZG/EEU/DZE/DZG/DEU,  
TTW 24/30 - 115 EDE/EDG/DDE/DDG,  
TTW 24 - 115 DZE/DZG, TTW 32/40 - 115 EZU/DZU,  
TTW-PK 16/20/24 - 115 DZE/DZG,  
TTW-PK 24/30 - 115 DDE/DDG,  
TTW-PK 32/40 - 115 DZU

**Original operating instructions**



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## **Technical changes**

Subject to modifications for the purpose of technical improvement.

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# 1 About these operating instructions

## 1.1 Product documentation

These are the original operating instructions.

### Target group:

operating personnel, kitchen directors.

## 1.2 Typographical conventions

- ① **Explanatory information, reference** on special features or special cases
- ↪ **Cross reference** to a chapter or external document
- ✓ **Requirement** which must be met 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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## 1.3 Warnings



Signal word! Type and source of danger!

Possible consequences of non-compliance with warnings.

- Measures to avoid hazards and the consequences thereof.

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

**Danger** warns of possible highly severe/fatal bodily injury.

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

**Caution** warns of possible minor bodily injury or damage to property.

# 2 About this product

## 2.1 Scope of application

The tray transport trolleys are designed for the following purposes:

- Transport of covered meals on Gastronorm, Euronorm or compact trays to the serving point
- Short-term cooling of food in combination with pre-cooled eutectic plates (coolant accumulators) (**only** double-walled tray transport trolley)

The tray transport trolley may only be used for the short-term transport of food in covered containers.

The tray transport trolley is particularly suitable for catering in social facilities (clinics, retirement homes, day care centres), hotels, the food service industry (banquets, party services) and in company catering (canteens, dining halls).

**The following applications are not permitted:**

- Transporting persons with or on the unit or its attachments
- Use as a substitute for a ladder, climbing aid or climbing frame
- Transport or storage of hazardous or toxic substances/liquids.
- Continuous use and long-term food storage
- Transport of uncovered food
- Long-term cooling or warming of food

## 2.2 Conditions of use

### General information

The unit may only be used for the applications specified. The owner is responsible for ensuring appropriate and proper use of the unit. The unit may only be operated under the permissible ambient conditions. Users of the unit must be instructed on its operation and must have read and understood the operating instructions.

### Environment

The unit may be used wherever the ambient temperature is between +15 °C and +38 °C and at normal humidity (without condensation) in closed rooms or in roofed areas where it will not be exposed to the weather.

## 2.3 Product features

### General information

The tray transport trolley is made of stainless steel as standard.

- Depending on the unit model, the unit body is single or double-walled. On the double-walled model the unit body is insulated.
- Each unit compartment is provided with a double-walled, insulated door with an all-round seal and a snap-in lock.
- The chassis of the tray transport trolleys with one compartment consists of four steering castors, two of which have castor brakes.
- The chassis of the tray transport trolleys with two compartments consists of two steering castors with castor brakes and two fixed castors.

### Unit designation

The unit designation contains an abbreviation of the unit model. TTW stands for tray transport trolley and PK for passive cooling. The subsequent numbers and letters have the following meaning:

#### Designation with 1 number sequence followed by a letter sequence:

- The first and second digit refer to the tray capacity (16, 20, 24, 30, 32 or 40 trays), e.g. TTW **16** EN
- The sequence of letters stands for the tray type, e.g. TTW 16 **EN**:
  - GN=Gastronorm tray
  - EN = Euronorm or compact tray
  - Universal = Gastronorm and Euronorm or compact trays

#### Designation with 2 number sequences followed by a letter sequence:

- The first and second digit refer to the tray capacity (16, 20, 24, 30, 32 or 40 trays), e.g. TTW **16**-115 EZG
- The third, fourth and fifth digits specify the spacing of the support ledges (115 mm), e.g. TTW 16-**115** EZG
- The first letter indicates the model of the walls, e.g. TTW 16-115 **EZG**:
  - E = single-walled
  - D=double-walled
- The third letter stands for the number of compartments, e.g. TTW 16-115 **EZG**:
  - E = 1 compartment
  - Z = 2 compartments
  - D = 3 compartments
- The last letter stands for the tray type, e.g. TTW 16-115 **EZG**:
  - G=Gastronorm trays
  - E = Euronorm trays or compact trays
  - U = Gastronorm and Euronorm trays or compact trays

① The models for compact trays have no exact marking.

### Assignment of tray types

Tray type	Unit	Details
Gastronorm trays	<ul style="list-style-type: none"> <li>– TTW 16/20/24/30 <b>GN</b></li> <li>– TTW 16/20-115 <b>EZG/DZG</b></li> <li>– TTW 24/30-115 <b>EDG/DDG</b></li> <li>– TTW-PK 16/20-115 <b>DZG</b></li> <li>– TTW-PK 24/30-115 <b>DDG</b></li> </ul>	The trays are inserted with the short side first.
Euronorm trays	<ul style="list-style-type: none"> <li>– TTW 16/20/24/30 <b>EN</b></li> <li>– TTW 16/20-115 <b>EZE/DZE</b></li> <li>– TTW 24/30-115 <b>EDE/DDE</b></li> <li>– TTW-PK 16/20-115 <b>DZE</b></li> <li>– TTW-PK 24/30-115 <b>DDE</b></li> </ul>	The trays are inserted with the short side first.
Gastronorm and Euronorm trays	<ul style="list-style-type: none"> <li>– TTW 16/20/32/40 <b>Universal</b></li> <li>– TTW 16/20-115 <b>EEU/DEU</b></li> <li>– TTW 32/40-115 <b>EZU/DZU</b></li> <li>– TTW-PK 32/40 <b>DZU</b></li> </ul>	<ul style="list-style-type: none"> <li>– The trays are inserted with the long side first.</li> <li>– Two trays per ledge fit in a unit compartment.</li> </ul>
compact tray	<ul style="list-style-type: none"> <li>– TTW 16/20/24/30 <b>EN</b></li> <li>– TTW 16/20-115 <b>EZE/DZE</b></li> <li>– TTW 24/30-115 <b>EDE/DDE</b></li> <li>– TTW-PK 16/20-115 <b>DZE</b></li> <li>– TTW-PK 24/30-115 <b>DDE</b></li> </ul>	The trays are inserted with the short side first.
	<ul style="list-style-type: none"> <li>– TTW 16/20/32/40 <b>Universal</b></li> <li>– TTW 16/20-115 <b>EEU/DEU</b></li> <li>– TTW 32/40-115 <b>EZU/DZU</b></li> <li>– TTW-PK 32/40 <b>DZU</b></li> </ul>	<ul style="list-style-type: none"> <li>– The trays are inserted with the long side first.</li> <li>– Two trays per ledge fit in a unit compartment.</li> </ul>

### Handling and operation

- Vertical push handles on both short sides enable simple manoeuvring of the tray transport trolley. All-round bumper rails protect the unit from damage.
- The unit doors have been provided with a self-closing door lock. The doors can be opened approx. 270° and locked to the exterior sides. On units with 3 unit compartments, the middle door can be opened by approx. 180° and locked.
- The interior side walls feature support ledges.
- On unit models for Gastronorm and Euronorm trays, two indentations each are provided above the support ledges. They prevent accidental tipping when removing the trays.

### Standard model

The standard model of the tray transport trolley includes:

- Single or double-walled unit body made of stainless steel depending on model
- Up to three compartments, depending on the model
- Double-walled hinged door for each unit compartment
- Door sealing profile(s), all-round and removable
- Self-closing door lock
- Space between ledges of 115 mm
- Deep-drawn support ledges with tip safety
- Two push handles on each unit side wall
- All-round bumper rail
- Four steering castors, two with castor brakes (units with one unit compartment)
- Two steering castors with castor brakes and two fixed castors (units with two or three unit compartments)
- Castor arrangement "A": Castors at the unit corners

### Options and accessories

The tray transport trolley is available with the following optional equipment:

Optional Equipment	Details
Side wall design for compact trays	–
Body hygiene version H1	–
Washing system suitability	only for hygiene version H1
Various castor models	–
Castor arrangement "D"	steering castors on the unit corners and two additional fixed castors on both long unit sides
Castor option with central brake and/or with central directional locking device	–
CNS push handles	–
Bumper strips milled all around	–
Roof bumper strips	– all around – milled all around
Body impact protection 3-sided	–
Transport security doors	–
Antistatic conveyor	–
Roof gallery	– all around – 3-sided
Draw bar and coupling	–
Loading weight (including TTW)	– up to 335 kg – from 335 kg
Different diameters of the draw bar mount	–
Drain connection in the base	–
Film removed	–
Sea freight packaging	–
Eutectic plates (coolant accumulators)	suitable only for unit compartments with Gastronorm tray dimensions and double-walled model or unit model with passive cooling (TTW-PK)

## 3 Safety

### 3.1 Safe use



- Carefully read and comply with the operating instructions before commissioning and using the appliance for the first time.
- Read and observe the information on safe use, safety instructions and warnings.
- Store the operating instructions so that they are accessible to the operating personnel at all times.

### 3.2 General information

The unit has been built using state-of-the-art technology. All the requirements necessary to ensure safe operation have been met. Nevertheless, residual risk does exist when operating the unit. The safety precautions and warnings in these operating instructions are there to help you protect yourself against these hazards. Improper use of the unit can lead to serious injury or damage.

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

#### Warnings

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

### 3.3 Operator duties

The owner is responsible for ensuring that all users have read these instructions before operating the unit.

- Make sure that users of the unit are instructed in its operation and have understood these operating instructions.
- Make sure that users are aware of the hazards that the unit presents and that they are able to assess them.

### 3.4 Instruction of third parties

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

### 3.5 Conditions of use

**Danger of tipping!**

Unit may tip over. This may lead to personal injury and damage to property.

- Do **not** use the unit as a makeshift ladder or allow children to climb on it.
- Keep the unit away from children.
- Only operate the unit under the authorised ambient and weather conditions.

↳ "2.2 Conditions of use" on page 6

- The unit is only to be used when it is in proper working order.
- If the unit is damaged, secure it against accidental use.

If the unit is damaged or malfunctions, **stop** using it and have it repaired immediately by an authorised service centre.

↳ "Repairs" on page 33

### 3.6 Transport

**Heavy unit that may tip over!**

Improper unit transport can lead to serious injury or damage.

- Transport the unit in an upright position **only**.

**Material damage to the appliance due to improper transport!**

- Transport the appliance only on a lorry with a sufficiently dimensioned loading ramp or in a delivery van.
- Make sure that the loading ramp does **not** exceed an angle of inclination of 10°.
- Secure the appliance on the pallet so that it cannot slip (safety straps).
  - Only transport the unit with the castor brakes released.
  - Braked castors are **not** sufficient restraint for transport.
- Secure the unit against vertical movement during transport.
- Use padded locking bars.
- Make sure that the unit is secure and cannot slide during transport or fall from the loading area.

### 3.7 Commissioning

- Remove all protective film when unpacking the unit.

### 3.8 Handling and operation

**Unsecured unit!**

Unintentional rolling of the unit can lead to personal injury and damage to property.

- Always apply the castor brakes to prevent it from rolling away.
- Always cover food on Gastronorm/Euronorm trays with dome covers.
- Always cover food on plates with cloches.

**Impaired food quality!**

Interruptions during storage or regeneration can affect the quality of the food in the unit when keeping it warm or cold.

- Only open the unit briefly to remove food.
- Check core temperature.
- Check to see whether the quality of the food might be impaired.
- Dispose of food if necessary.

## Loading

### Heavy unit that may tip over!

Incorrect loading can shift the centre of gravity of the unit to the top of the unit, causing it to tip over. Tipping the unit can lead to serious personal injury and damage to property.

- **Always** load the unit from the bottom up.
- Load the bottom section of the unit only if you half-load it.
- Always unload the unit from the top down.
- Do not exceed the maximum weight limits for the load.

🔗 "Technical data" on page 34

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## Unit model with capacity of 2 trays per pair of ledges

### Unsecured load!

If the bead supports are not fully fitted, trays can slip when changing position. This may lead to personal injury and damage to property.

- Always load each pair of support ledges fully, e.g. with two trays.
- Keep unit doors closed while changing location.

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## Eutectic plates (coolant accumulators)

### Highly cooled eutectic plates!

Cooled eutectic plates are very cold. Contact with bare skin can lead to localised frostbite.

- Only handle cooled eutectic plates with protection (e.g. with gloves).

### Danger of slipping due to condensation water leaking out!

Eutectic plates can tarnish when heated with condensation, which can leak out of the unit. Slipping on the spilled water can cause injuries.

- Do not use eutectic plates when keeping food warm.
- Empty catch tray regularly.
- Completely wipe up condensation water which has run out onto the floor.

### Permitted surface load:

- Unit top: 20 kg

## Unit doors

### Unsecured load!

If the unit is placed on a sloping surface, trays and food may slip out of the unit when the doors are opened. This may lead to personal injury and damage to property.

- Only open the unit doors if the unit is standing on a level surface.

### Danger of pinching and crushing due to opening/closing doors and hinges!

When opening, locking and closing the unit doors, limbs (e.g. fingers) can become trapped and crushed. This can lead to bruising.

- When opening and closing the appliance door, ensure that there are no limbs present in the door opening or door hinges.
- Open, lock and close unit doors carefully and without force.

## Hot objects and food

### Burns from hot surfaces and objects!

When keeping food warm, surfaces and objects placed inside (e.g. dishes) can become very hot. Contact with hot surfaces and objects can lead to burns.

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

### Scalds from hot liquid food!

Hot liquid food can flow over the edge of the plate. Contact can lead to scalding.

- Hold trays with hot liquid food horizontally.
- Avoid jerky movements of the trays with hot liquids or foods.
- Operators are to be given special instructions on handling hot liquid food.

### 3.9 Change of location

- Ensure that the location of the appliance satisfies the current issue of the ordinances, regulations, other trade association rules and, if applicable, other national regulations of the countries.

#### Risk of tipping over when travelling on sloping surfaces!

The unit can tip over when travelling on sloping surfaces. This may lead to personal injury and damage to property.

The unit can be tilted to an **angle of 10°** when stationary before it is at risk of tipping over.

- Only sloped surfaces with an incline of <10° may be crossed.

#### Unit can break out sideways when driving over sloping surfaces!

The unit may break sideways on sloping surfaces, causing the unit to tip over or roll away. This may lead to personal injury and damage to property.

- Always push the unit over sloped surfaces with **two** people (one at each side wall of the unit).

#### Uncontrollable unit!

Improper transport may result in damage to the unit (e.g. to the casters), causing the unit to tip over or roll away and loads to slip or fall off. This may lead to personal injury and damage to property.

- Do **not** move the unit when the castor brakes are applied.
- Avoid impacts.
- Drive over thresholds or steps **carefully** (without momentum).
- **Do not** traverse uneven floors.
- The unit should be pushed only, **never** pulled.

#### Accidental unit movement!

Damage to the castor brakes or inadequate braking performance can cause the unit to roll uncontrollably and lead to personal injury and damage to property.

- Before transporting the unit, check that the castor brakes are working properly by positioning the unit on a flat surface and locking the castors.
- Ensure that the appliance is stable, and will not roll or slide.
- If there are signs of damage to the roller castors or inadequate braking performance:  
**Do not** use the appliance, but have the defective castor(s) replaced immediately by an authorised service centre.

↳ "Repairs" on page 33

- If the appliance is standing on an inclined area:  
In addition to the locked castor brakes, secure the appliance against unintentional rolling away using further safety measures (e.g. wheel chocks).

#### Danger of pinching when releasing and locking the wheel locks!

The foot can become trapped when releasing and locking the wheel locks. This can lead to injuries.

- Do not place your foot between the wheel locks and the all-round impact protection.

#### Danger of crushing when pushing the unit!

When the unit is being transported, hands can be trapped and crushed between the wall or other objects (e.g. cupboard) and the unit. This can lead to bruising.

- Keep hands and fingers away from the wall or unit when pushing.

#### Excessive speed!

When driving the unit at high speeds, there is a risk that the unit will tip over or that it will no longer be possible to stop it due to its high weight. This may lead to personal injury and damage to property.

- Always bring the unit to its new location at a sensible speed (**no** faster than 3 km/h – equivalent to a slow walking pace).

#### Restricted visibility!

When moving the unit with limited visibility, people and objects may be overlooked. This may lead to personal injury and damage to property.

- The unit should be pushed only, **never** pulled.
- In circumstances of restricted visibility, unclear transport situations and when driving over ramps, hollows and sloping surfaces: Always provide an additional person for safety.
- Push a heavy unit with **two** people (one at each side of the unit).
- When transporting the appliance, ensure there is no failure to see persons or objects in front of the appliance.

**Heavy unbraked unit!**

If you push with just one hand, this may prevent you from applying the brakes quickly enough if the unit is heavy. This may lead to personal injury and damage to property.

- Always push the unit with two hands using the push handles on the side of the unit with the castors and wheel locks.
- Ensure that the person moving the appliance to its new location is able to slow down the loaded appliance in the event of an emergency.

**Transport of objects****Falling objects!**

When pushing the unit, objects, trays and food can slide off the top of the unit or out of the unit. Falling objects can lead to personal injury and damage to property.

- Remove objects from the top of the unit.
- Keep unit doors closed while changing location.

**Unit version with gallery**

For units with a gallery, objects can be transported with a firm stand on top of the unit. To prevent slipping, objects must be secured appropriately and adequately according to their size, shape and weight, e.g. with:

- suitable transport containers
- non-slip surfaces
- tension belt
- Secure objects adequately.
- Take structural conditions such as clearance height or width into account.

**Danger of tipping due to shift in centre of gravity!**

Objects on the top of the unit can cause the centre of gravity of the unit to shift unfavourably. The unit can tip over when travelling on sloping surfaces. This may lead to personal injury and damage to property.

- Adapt style of travelling to local ambient conditions.
- When travelling on sloping surfaces, remove objects from the top of the unit.

**Change of location used as a train****Danger of tipping! Heavy unit!**

The unit is very heavy and has a high potential momentum when moving. There is an increased risk of tipping when changing location during train operation. This may lead to personal injury and damage to property.

The duty of supervision is essentially based on the applicable laws and regulations adopted by relevant national authorities, e.g. the legislator, the employer's liability insurance associations, regulations on a state or municipal level and/or other authorities.

- Only allow train operation to be carried out by users who have been fully instructed in moving such objects and have a corresponding certificate of competence.
- Ensure that users are aware of and can assess the hazards associated with the units in train operation.
- Keep children away from the units.
- Do **not** leave joined units unattended.
- Wear safety shoes and any other prescribed safety clothing.
- If there are signs of damage to the unit:  
Do **not** use the unit, secure it against accidental use and have it repaired immediately by an authorised service centre.

↳ "Repairs" on page 33

**Draw bar may fly up!**

The folded-down draw bar is under spring tension. Uncontrolled flying up can lead to injuries.

- Keep limbs away from the pivoting area of the draw bar.
- Ensure that the draw bar is secured.

**Unintentional uncoupling!**

The units can become disconnected themselves during transport due to unevenness or due to damaged or missing safety catches. This may lead to personal injury and damage to property.

- **Always** secure the coupling pin and the coupled draw bar with the safety catch.
- Check the safety catch for damage before moving it.

- ▶ Do **not** connect / couple the unit if the safety catch is missing or damaged. If necessary contact B.Pro service.

↳ [B.PRO Service](#)

### 3.10 Shutting down

#### Danger of children being trapped inside

Locking children in!

The appliance has compartments that are large enough for a child to climb into. Children who climb into empty tray transport trolleys cannot free themselves if the unit door is closed!

- ▶ **Never** leave the unit unattended.
- ▶ Always **check** to ensure that there are no children or animals in the compartments before commissioning or disposing of the unit.
- ▶ Place the empty transport trolleys with the unit door side toward the wall or place them in an area inaccessible to children.

### 3.11 Cleaning and care

- ▶ Comply with the provisions of Regulation (EC) No. 852/2004 and the national hygiene regulations.

Danger of slipping!

There is a danger of slipping if cleaning water runs out onto the floor during or after cleaning. Slipping on the spilled water can cause injuries.

- ▶ Thoroughly dry the unit after cleaning.
- ▶ Remove cleaning water from the bottom of the unit interior.
- ▶ Completely wipe up cleaning water which runs out onto the floor.

### 3.12 Hygiene

- ▶ Observe the food-specific regulations and the characteristics of the food in question when refrigerating food or keeping it hot.
  - ▶ You must comply with the specifications in Regulation (EC) no. Nr.852/2004 and your national hygiene regulations.
- ① The inside unit body is optionally available in hygiene type H1.

### 3.13 Standards and guidelines

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

- ▶ Observe the applicable standards, guidelines and safety regulations.

### 3.14 Product marking

The unit is provided with a rating plate (see Chapter 12.1 on page 33).

- ① The warranty is voided if the rating plate is removed.

## 4 Additional information - Use in day-care centres and school catering

General safety instructions when dealing with children.

- To ensure safe handling of this unit when children are present, please (see Chapter 3.1 on page 8) comply with all safety instructions listed in the Safety Chapter.
- ① This additional information describes the assessable, additional residual risks as a result of the access of children/young people to the product.



### Danger! Locking children in!

The appliance has compartments that are large enough for a child to climb into. Children who climb into empty tray transport trolleys cannot free themselves if the unit door is closed!

- **Never** leave the unit unattended.
- Always **check** to ensure that there are no children or animals in the compartments before commissioning or disposing of the unit.
- Place the empty transport trolleys with the unit door side toward the wall or place them in an area inaccessible to children.



### Caution! Burns from hot surfaces and objects!

When keeping food warm, surfaces and objects placed inside (e.g. dishes) can become very hot. Contact with hot surfaces and objects can lead to burns.

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



### Caution! Highly cooled eutectic plates!

Cooled eutectic plates are very cold. Contact with bare skin can lead to localised frostbite.

- Only handle cooled eutectic plates with protection (e.g.with gloves).



### Caution! Danger of pinching and crushing due to opening/closing doors and hinges!

When opening, locking and closing the unit doors, limbs (e.g. fingers) can become trapped and crushed. This can lead to bruising.

- When opening and closing the appliance door, ensure that there are no limbs present in the door opening or door hinges.
- Open, lock and close unit doors carefully and without force.

## General information and special dangers

### Application

- The unit may only be used for the scope of application specified in these operating instructions.

### Duty to supervise

- The unit must **not** be moved or operated without supervision.

The duty of supervision is essentially based on the applicable laws and regulations adopted by relevant national authorities, such as the legislator, the employer's liability insurance associations, regulations on a state or municipal level and/or other authorities.

### Improper use as a toy

Improper use as a toy can cause the unit to tip and result in injury.

- Do **not** climb on the unit.

### Improper use as a storage space

- The unit must **not** be used as a storage space for objects and/or living beings.

### Improper use as a vehicle

- The unit must **not** be used as a vehicle or a means of transport.
- **Do not** lie under the unit.

The unit is very heavy and has a high potential momentum when moving. If the unit is misused as described above, it may cause injury as people can be run over or crushed, for example.

### Castor brakes

The castor brakes have openings that are part of their technical design. If the castor brakes are applied without supervision, these openings can lead to crushing of extremities.

The appliance can be set in motion if a castor lock is opened inadvertently.

- After the appliance has been positioned at its intended location initially or after a change of location: Apply the available castor brakes.

## 5 Transport

### 5.1 Checking for/reporting transport damage

This procedure ensures that damage claims are handled correctly.

The unit recipient **must** provide suitable proof if transport damage is reported at a later point in time.

- The unit must be checked for damage incurred during transport immediately after delivery (Visual inspection).
- Document any transport damage on the waybill in the presence of the carrier (Description of the defect).
- 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.

### 5.2 Scope of delivery

The exact scope of delivery and the design of the appliance are documented in the delivery documents.

#### Standard scope of delivery

- (1) tray transport trolleys
- (2) Operating instructions

### 5.3 Unpacking

- Open the transport packing at the places provided.
- **Do not** tear open the transport packaging and **do not** cut it open!
- Check the scope of delivery.
- Remove all protective film when unpacking the unit.

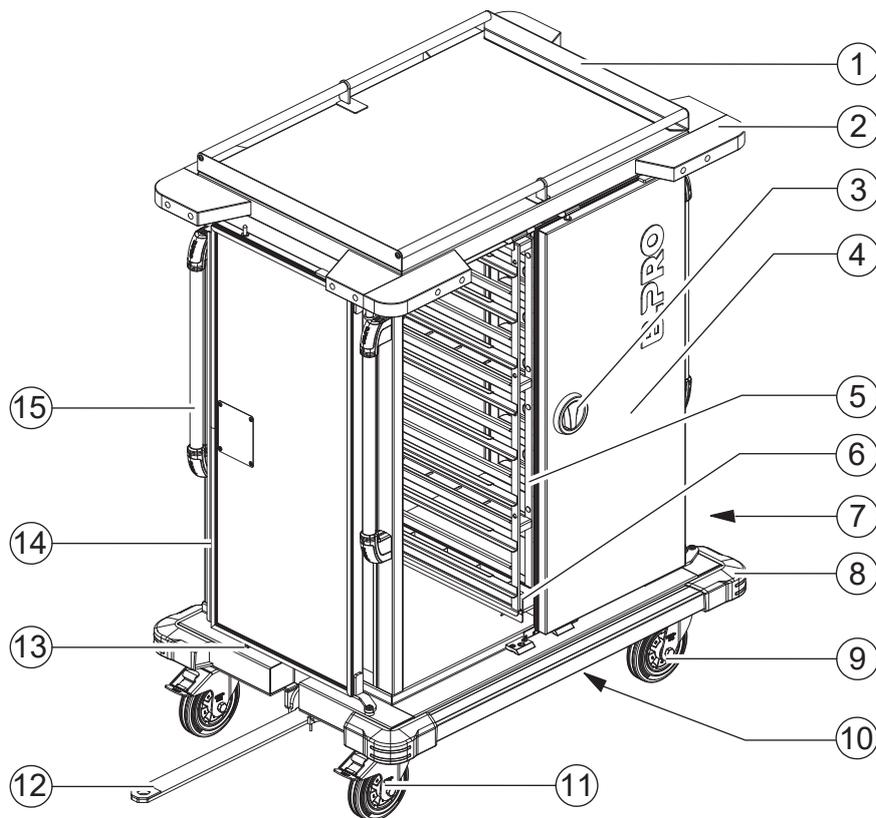
### 5.4 Disposing of packaging material

Packaging materials are recyclable.

- Recycle packaging materials in a proper, environmentally responsible manner as per applicable statutory requirements.

## 6 Overview

### 6.1 Unit overview



- (1) Railing (optional)
- (2) Additional bumper rail at top (optional)
- (3) Door lock (PK models)
- (4) Unit door
- (5) Centre wall with support ledges and insertion levels for eutectic plates (PK models)
- (6) Condensation drip tray (PK models)
- (7) Fastening bolt for mounting draw bar
- (8) All-round bumper rail
- (9) Fixed castor
- (10) Antistatic conveyor (optional)
- (11) Steering castor with castor brake
- (12) Draw bar
- (13) Door lock
- (14) All-round door sealing profile
- (15) Push handle

## 7 Commissioning

### Prerequisites for operation

- ✓ Unit has reached room temperature and is dry
- ✓ No faults detected, no visible damage to unit
- ✓ Castor brakes are locked
- ✓ Protective films removed
- ✓ Unit installed and stable

### 7.1 Carrying out initial cleaning

- ▶ Perform an initial cleaning of the appliance after delivery.
  - ▶ Remove all cardboard, protective paper layers, film and adhesive tape.
  - ▶ Clean surfaces with suitable cleaning agents.
- ↪ "Cleaning and care" on page 28

### 7.2 Initial use after a long period of non-use

- ▶ Clean and check the unit before use.
  - ▶ Clean the unit thoroughly.
- ↪ "Cleaning and care" on page 28
- ▶ Check that castors, castor brakes, doors, door locks, door seals and handles function correctly.
  - ▶ In the event of a defect, secure the unit against accidental use and arrange for it to be repaired immediately by an authorised service centre.
- ↪ "Repairs" on page 33

## 8 Handling and operation

### 8.1 Opening a unit door



#### Caution! Impaired food quality!

Interruptions during storage or regeneration can affect the quality of the food in the unit when keeping it warm or cold.

- ▶ Only open the unit briefly to remove food.



#### Caution! Unsecured load!

If the unit is placed on a sloping surface, trays and food may slip out of the unit when the doors are opened. This may lead to personal injury and damage to property.

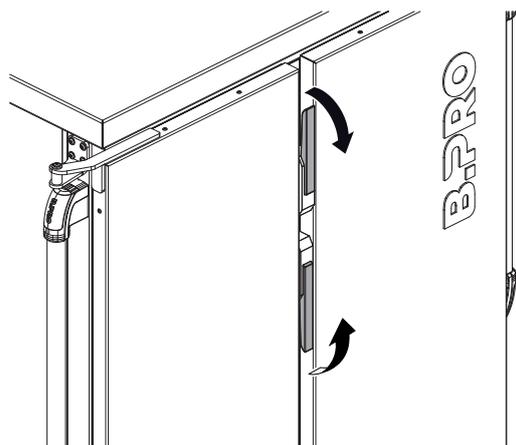
- ▶ Only open the unit doors if the unit is standing on a level surface.



#### Caution! Risk of trapping and crushing due to opening doors and hinges!

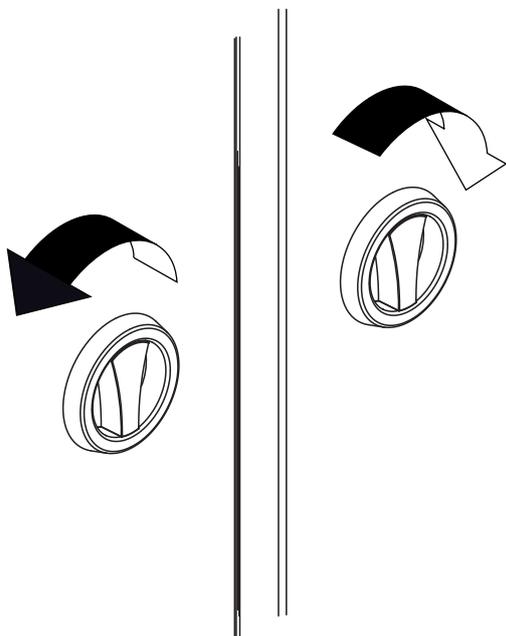
When opening and locking the unit doors, limbs (e.g. fingers) can be trapped and crushed. This can lead to bruising.

- ▶ When opening the unit door, ensure that there are no limbs in the door opening or door hinges.
- ▶ Carefully open and lock the unit doors without swinging.



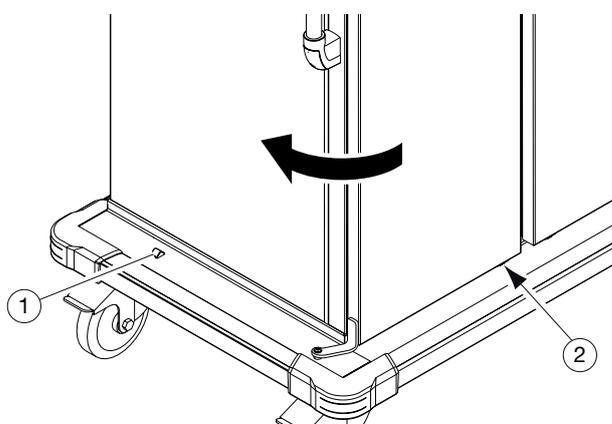
- ✓ Unit is standing on a level surface.
- Pull the door handle on the door lock in the direction of the arrow and open the unit door.
- Open and lock the unit door carefully and without swinging.

Unit version PK- Model



- ✓ Unit is standing on a level surface.
- Turn the door lock in the direction of the arrow until it stops and open the unit door.
- Open and lock the unit door carefully and without swinging.

Locking the unit door



- Open the unit door completely (270°) and press onto the short side of the unit. The door catch (1) is felt to engage in the door lock (2).

## 8.2 Closing the unit door



### Danger! Locking children in!

The appliance has compartments that are large enough for a child to climb into. Children who climb into empty tray transport trolleys cannot free themselves if the unit door is closed!

- **Never** leave the unit unattended.
- Always **check** to ensure that there are no children or animals in the compartments before commissioning or disposing of the unit.
- Before closing the unit doors, always make sure that there are no children inside.



### Caution! Risk of trapping and crushing due to closing doors and hinges!

When closing the unit doors, limbs (e.g. fingers) can be trapped and crushed. This can lead to bruising.

- When closing the unit door, ensure that there are no limbs in the door opening or the door hinges.
- Close unit doors carefully and without swinging them.

- Pull the unit door carefully from the magnetic lock.
- Close unit door slowly.
- Press the unit door into the lock until you hear and feel it lock into position.

## 8.3 Empty condensation-water catch tray

### Unit model TTW-PK

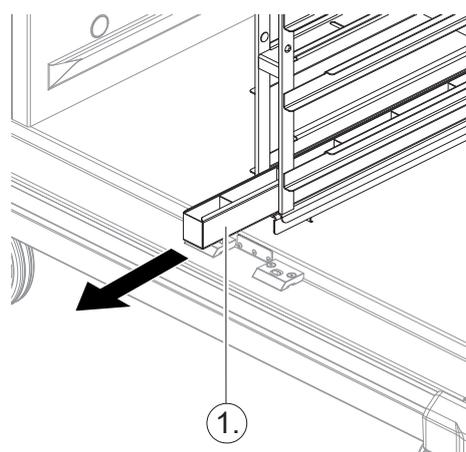
① Condensation water forms on cooled eutectic plates due to cooling of the surrounding area. The unit is equipped with a catch tray for holding the resulting condensation water. The amount of condensation water is highly dependent on the ambient conditions (temperature, humidity).



### Caution! Danger of slipping due to condensation water leaking out!

Eutectic plates can tarnish when heated with condensation, which can leak out of the unit. Slipping on the spilled water can cause injuries.

- Do not use eutectic plates when keeping food warm.
- Empty catch tray regularly.
- Completely wipe up condensation water which has run out onto the floor.



- Open the unit doors.
- Slowly pull condensation-water catch tray out of unit by moulded handle (1.).
- Empty condensation-water catch tray.
- Pull out the condensation-water drain plug in the base of the unit and drain the condensate. If necessary, place a suitable container underneath.
- Wipe the bottom of the unit dry.
- Reinsert the condensation-water drain plug.
- Slide condensation-water catch tray into dividing wall in bottom position.

## 8.4 Insert eutectic plates (coolant accumulators)



### Caution! Highly cooled eutectic plates!

Cooled eutectic plates are very cold. Contact with bare skin can lead to localised frostbite.

- Only handle cooled eutectic plates with protection (e.g.with gloves).

### Unit model TTW-PK

The centre wall in the interior of the unit is equipped with holders for holding GN 1/1 eutectic plates.

- ✓ Pre-cooled eutectic plates
- ✓ Empty condensation water catch tray mounted in dividing wall
- ✓ Opening unit door
- Slide the eutectic panels, narrow side first, from top to bottom into the guide rail of the centre panel.
- Close the unit doors.

## 8.5 Loading the unit



### Warning! Heavy unit that may tip over!

Incorrect loading can shift the centre of gravity of the unit to the top of the unit, causing it to tip over. Tipping the unit can lead to serious personal injury and damage to property.

- **Always** load the unit from the bottom up.
- Load the bottom section of the unit only if you half-load it.
- Do not exceed the maximum weight limits for the load.
- ↳ "Technical data" on page 34

### Unit model with capacity of 2 trays per pair of ledges



### Caution! Unsecured load!

If the bead supports are not fully fitted, trays can slip when changing position. This may lead to personal injury and damage to property.

- Always load each pair of support ledges fully, e.g.with two trays.
- Keep unit doors closed while changing location.

- ✓ Gastronorm/Euronorm trays: Food covered with domed covers
- ✓ compact tray: Lower and upper tray sections interlocked with locking slider
- Open the unit doors (see Chapter 8.1 on page 17).
- Insert the tray so that the tray edges lie on the ledges.
- With Gastronorm and Euronorm trays, make sure that the tray edges do not rest on the indentations for the tip safety.
- Close the unit doors (see Chapter 8.2 on page 19).

### 8.5.1 Refrigerating food

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#### Unit model TTW-PK

In combination with pre-cooled eutectic plates (coolant accumulators), the unit can be used for the short-term refrigeration of food.

- ▶ Insert the pre-cooled eutectic plate/s into the special centre wall.
  - ↳ "Insert eutectic plates (coolant accumulators)" on page 20
- 

### 8.5.2 Keeping food hot

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Caution! Danger of slipping due to condensation water leaking out!

Eutectic plates can tarnish when heated with condensation, which can leak out of the unit. Slipping on the spilled water can cause injuries.

- ▶ Do not use eutectic plates when keeping food warm.
- 

#### Double-walled, insulated unit model

In combination with suitable heat retainers and cloches or upper tray sections, the unit can be used for short-term temperature maintenance of food.

The unit is **not** suitable for keeping food warm for long periods of time. Comply with the respective standards.

---

## 8.6 Moving the unit to a new location

### 8.6.1 Change of location

- ① Special precautions must be taken if the route contains uneven surfaces.
  - ↳ "Traversing ramps, recesses, inclined surfaces" on page 26
- ① Observe safety instructions when changing location:
  - ↳ "Change of location" on page 11
- ✓ Do not place objects on top of the unit
- ✓ The unit door(s) is/are closed
- ✓ **Two** people

### 8.6.2 Manual change of location

---



Caution! Danger of pinching when releasing and locking the wheel locks!

The foot can become trapped when releasing and locking the wheel locks. This can lead to injuries.

- ▶ Do not place your foot between the wheel locks and the all-round impact protection.
- 

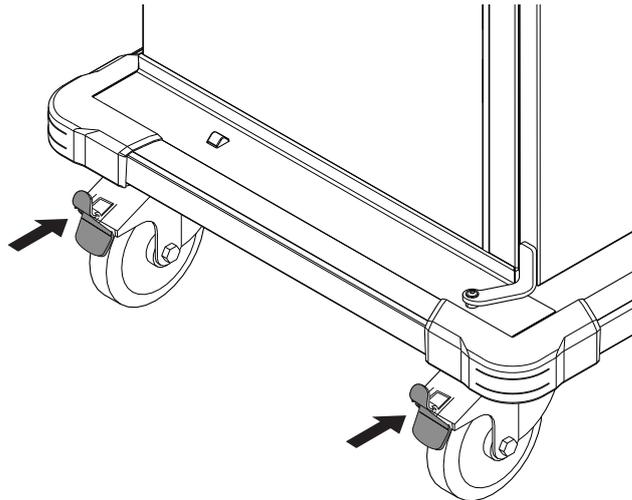


Warning! Restricted visibility!

When moving the unit with limited visibility, people and objects may be overlooked. This may lead to personal injury and damage to property.

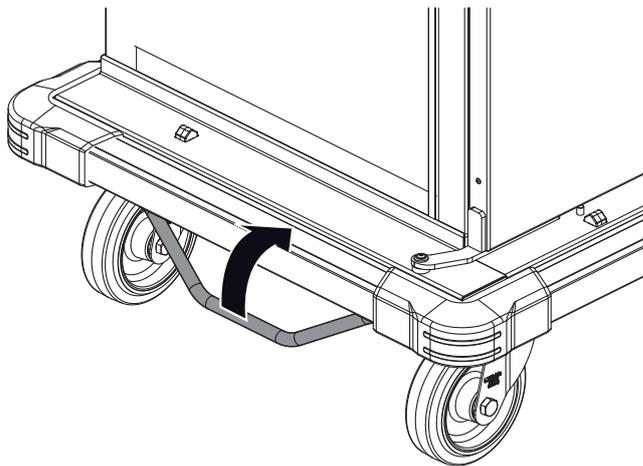
- ▶ The unit should be pushed only, **never** pulled.
  - ▶ In circumstances of restricted visibility, unclear transport situations and when driving over ramps, hollows and sloping surfaces: Always provide an additional person for safety.
  - ▶ Push a heavy unit with **two** people (one at each side of the unit).
  - ▶ When transporting the appliance, ensure there is no failure to see persons or objects in front of the appliance.
-

Unit model with castor brakes



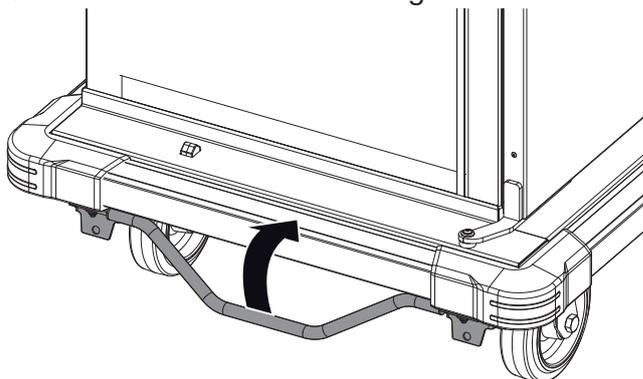
- Release the castor brakes.

Unit model with central brake



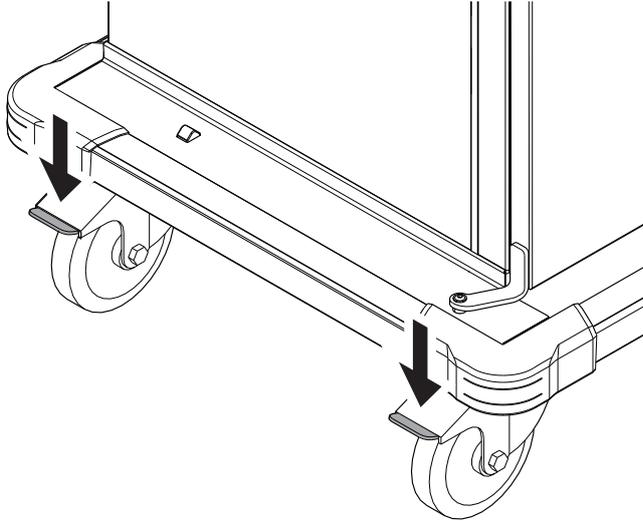
- Release the centre brake.

Unit version with central locking unit and directional locking device



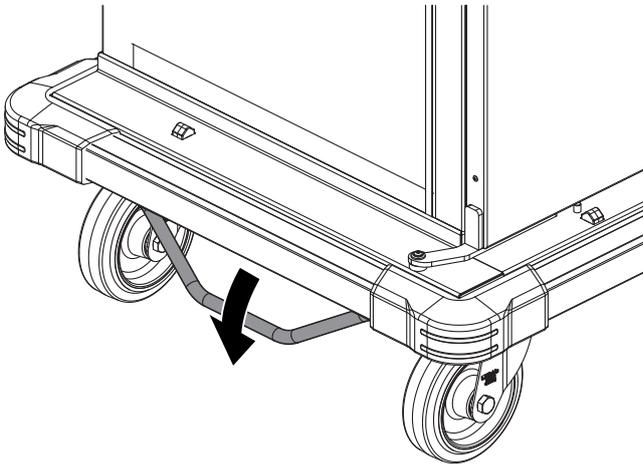
- Release the central brake and the directional locking device.

### Unit model with castor brakes



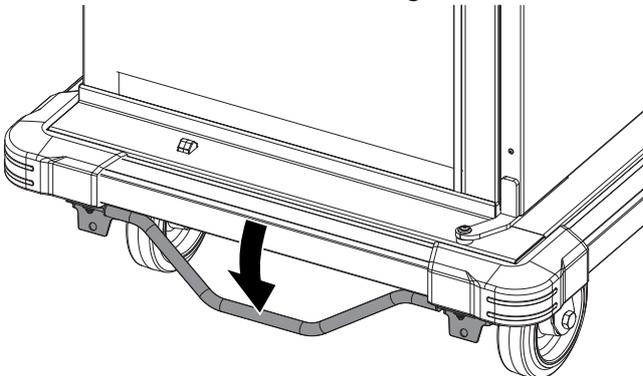
- Use both hands to push the unit to its new location using the push handles.
- Lock the castor brakes.

### Unit model with central brake



- Use both hands to push the unit to its new location using the push handles.
- Lock the central brake.

### Unit version with central locking unit and directional locking device



- Use both hands to push the unit to its new location using the push handles.
- Lock the central brake and the directional locking device.

### 8.6.3 Coupling units together

#### Unit model with draw bar



#### Caution! Draw bar may fly up!

The folded-down draw bar is under spring tension. Uncontrolled flying up can lead to injuries.

- Keep limbs away from the pivoting area of the draw bar.
- Ensure that the draw bar is secured.



#### Warning! Unintentional uncoupling!

The units can become disconnected themselves during transport due to unevenness or due to damaged or missing safety catches. This may lead to personal injury and damage to property.

- **Always** secure the coupling pin and the coupled draw bar with the safety catch.
- Check the safety catch for damage before moving it.
- Do **not** connect / couple the unit if the safety catch is missing or damaged.



#### Warning! Risk of tipping, heavy unit!

The unit is very heavy and has a high potential momentum when moving. There is an increased risk of tipping when changing location during train operation. This may lead to personal injury and damage to property.

- Observe the safety instructions for train operation.
- ↳ "Change of location" on page 11
- Keep children away from the units.
- Do **not** leave joined units unattended.
- If there are signs of damage to the unit:
  - Do **not** use the unit, secure it against accidental use and have it repaired immediately by an authorised service centre.
  - ↳ "Repairs" on page 33

#### Before train operation

- Before train operation, please note:
  - Connect a maximum of 4 units.
  - Only pull paired units in the direction of travel.
  - Only move the unit version with directional locks with the directional locks locked.
  - **Do not** use a defective unit in train operation.
  - **Do not** transport any objects on the top of the unit (gallery).
  - Load units correctly (see Chapter 8.5 on page 20).
  - Lock and secure the doors of the storage compartments. (see Chapter 8.2 on page 19).
  - Choose a suitable towing vehicle. Take into account the specifications of the towing vehicle manufacturer, e.g. speed, towing curve, steering angle and/or the permissible trailer load.
  - ↳ See the separate operating instructions of the towing vehicle.
  - Select the height of the coupling on the towing vehicle so that the drawbar of a coupled unit is folded out parallel to the ground.
- ① Restrictions on the choice of towing vehicle are generally imposed by the equipment used in towing operations (e.g. speed, towing curve, steering angle and/or the permissible trailer load).

## Used as a train

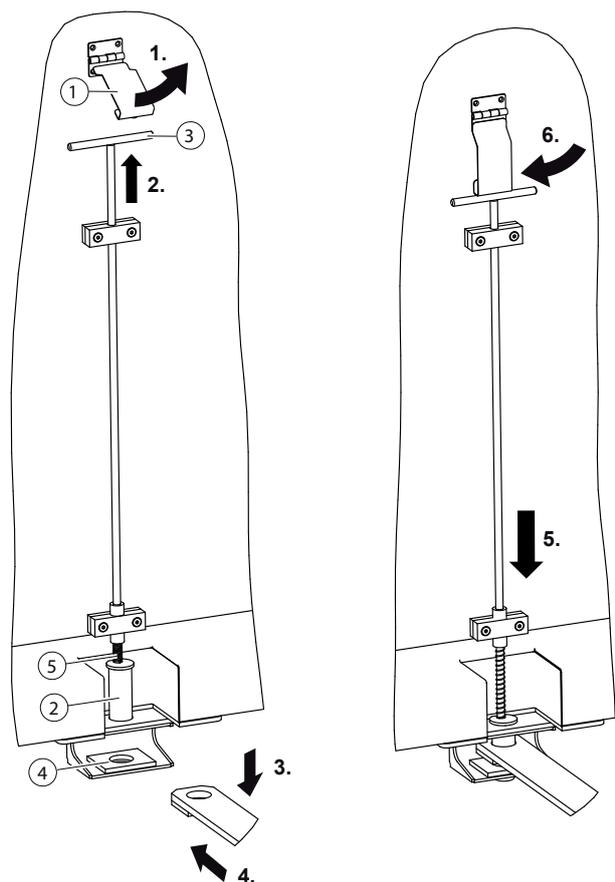


## Warning! Tilting unit!

The units are safe from tipping over up to an **angle of 10°** when stationary.

While driving, this cannot be ensured due to a wide variety of influencing factors. There is an increased risk of tipping. This may lead to personal injury and damage to property.

- Adjust driving style to on-site conditions.
- Observe speed limits as stated in the order documents.
- Move units at a maximum speed of **6 km/h**.



- Position the unit so that the side with the drawbar of one unit is facing the coupling pin of the other unit.
- Fold out the safety catch (1) on the coupling pin (2) of the unit to be coupled (1.).
- Pull the coupling pin upwards by the handle (3) (2.).
- Press down the draw bar of unit to be connected (3.), guide it into the coupling opening (4) to be connected to and release (4.) the coupling pin. The spring (5) presses the coupling pin downward (5.).
- Fold in the safety bracket completely on the unit to which it is connected (6.). The coupling pin and the draw bar are locked.

### 8.6.4 Traversing ramps, recesses, inclined surfaces



**Warning! Risk of tipping over when travelling on sloping surfaces!**

The unit can tip over when travelling on sloping surfaces. This may lead to personal injury and damage to property.

The unit can be tilted to an **angle of 10°** when stationary before it is at risk of tipping over.

- Only sloped surfaces with an incline of <math><10^\circ</math> may be crossed.



**Warning! Unit can break out sideways when driving over sloping surfaces!**

The unit may break sideways on sloping surfaces, causing the unit to tip over or roll away. This may lead to personal injury and damage to property.

- Always push the unit over sloped surfaces with **two** people (one at each side wall of the unit).

① All safety instructions for moving on level ground also apply to driving over ramps, hollows and sloping surfaces.

- Observe safety instructions when changing location:

↳ "Change of location" on page 11

① Observe the safety instructions for loadings for train operation.

↳ "Handling and operation" on page 9

#### Unit model TTW-PK

- ✓ Condensation-water catch tray empty

- ✓ **Two** people

- Check whether the unit can be safely pushed over the ramp, recess or sloped surface.

- Carefully push the unit over the ramp, hollow or sloping surface with two people (one on each side wall of the unit).

## 8.7 Removing food



**Caution! Burns from hot surfaces and objects!**

When keeping food warm, surfaces and objects placed inside (e.g. dishes) can become very hot. Contact with hot surfaces and objects can lead to burns.

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



**Warning! Heavy unit that may tip over!**

Incorrect loading can shift the centre of gravity of the unit to the top of the unit, causing it to tip over. Tipping the unit can lead to serious personal injury and damage to property.

- Always unload the unit from the top down.



**Caution! Scalds from hot liquid food!**

Hot liquid food can flow over the edge of the plate. Contact can lead to scalding.

- Hold trays with hot liquid food horizontally.

- Avoid jerky movements of the trays with hot liquids or foods.

- Operators are to be given special instructions on handling hot liquid food.

- Completely open the unit door and lock it.

↳ "Opening a unit door" on page 17

- Remove the trays **from above**.

## 9 Shutting down

### 9.1 Shutting unit down



**Danger! Locking children in!**

The appliance has compartments that are large enough for a child to climb into. Children who climb into empty tray transport trolleys cannot free themselves if the unit door is closed!

- ▶ **Never** leave the unit unattended.
- ▶ Always **check** to ensure that there are no children or animals in the compartments before commissioning or disposing of the unit.
- ▶ Place the empty transport trolleys with the unit door side toward the wall or place them in an area inaccessible to children.

- ▶ Empty unit.
- ▶ Cleaning the unit (see Chapter 17 on page 41).
- ▶ Close the unit doors (see Chapter 8.2 on page 19).
- ▶ Move the empty unit to a safe location and store it with the unit door facing a wall.
- ↳ "Moving the unit to a new location" on page 21

## 10 Troubleshooting

### The unit has external damage

Cause	Measure
Damage during transport, change of location or other external influences.	<ul style="list-style-type: none"> <li>▶ Shut unit down.</li> <li>↳ "Shutting down" on page 27</li> <li>▶ Secure the unit to ensure it cannot be started up accidentally.</li> <li>▶ Mark the unit with appropriate, clearly visible information.</li> <li>▶ Notify a centre authorised to carry out repairs.</li> <li>↳ "Repairs" on page 33</li> </ul>

### Corrosion of stainless steel parts

Cause	Measure
Incorrect handling/care.	<ul style="list-style-type: none"> <li>▶ Ensure proper handling/care.</li> <li>▶ Notify a centre authorised to carry out repairs.</li> <li>↳ "Repairs" on page 33</li> </ul>

## 11 Cleaning and care



### Caution! Danger of slipping!

There is a danger of slipping if cleaning water runs out onto the floor during or after cleaning. Slipping on the spilled water can cause injuries.

- Thoroughly dry the unit after cleaning.
- Remove cleaning water from the bottom of the unit interior.
- Completely wipe up cleaning water which runs out onto the floor.

### 11.1 Information on cleaning stainless steel

Corrosion-resistant stainless steel is a designation for extremely corrosion-resistant and hygienic steels. The stainless steel currently used at B.PRO (AISI 1.4301) primarily consists of iron, chrome and nickel. The corrosion resistance in corrosion-resistant steel is provided by what is known as a passive layer, formed on the material surface when it comes into contact with oxygen. Damage to the passive layer caused by mechanical impact is automatically repaired if sufficient oxygen is present on the material's surface. The passive layer can be damaged due to the effects of certain aggressive agents. Such substances are also found in low concentrations in drinking water, one example being chloride. When water evaporates, it may produce a critical higher concentration of substances. Grease, limescale, starch and protein deposits can impair the formation or renewal of a passive layer.

#### **The following substances may also cause or advance corrosion if they come into contact with stainless steel:**

- Concentrated acids, halogens, such as chloride or bromide, and their salts, and seasoning containing cooking salts
- Acid vapours, which may form when industrial cleaners are used, for example
- Contact with other metals, such as steel or iron
- Contact with iron, such as iron contained in steel wool, chips from pipelines or water containing iron particles

Contact with the aforementioned substances must be avoided to maintain corrosion resistance.

Observe the following cleaning and care instructions.

- Stainless-steel surfaces must be kept clean, dry and open to the air at all times.

#### **① B.PRO recommends:**

Observe the additional instructions for stainless steel surfaces subject to heavy wear:

- Remove/dry water, moisture and water spots immediately.
- **Do not** allow water, moisture and spots of water simply to evaporate, do **not** allow them to dry out.
- Wipe to remove any visible deposits.
- Then wipe and rub the cleaned surface dry with a soft cloth.
- Do **not** cover the surface after drying.
- Treat the surface with DeepClean Stainless Steel.

#### **Personal protective equipment**

- Wear personal protective equipment (e.g. safety footwear, protective gloves, protective eyewear, etc.).
- Observe the cleaning agent manufacturer's instructions (cleaning agent safety data sheets).

### 11.2 Cleaning interval

- Thoroughly clean and dry the appliance after **each time** it is used.

### 11.3 Cleaning methods

- **Do not use** steam jet units, high-pressure cleaners, water sprayers or similar cleaning devices.
- Do not use pointed or sharp objects for cleaning.

#### Prescribed cleaning method for daily routine cleaning

- Wipe clean with a damp cloth
- Hose cleaning **only** for units of the hygienic version H1 (optional).
- Hose cleaning and washing systems **only** for units of the H1 hygiene version with washing system suitability (optional).
- Remove stubborn dirt with a brush (plastic or natural bristles).
- ① Any other cleaning methods to be used **must** be approved by B.PRO.

### 11.4 Cleaning agents



#### Caution! Material damage!

Stainless steel cleaning agents and abrasive cleaners scratch the surface of plastic parts.

- Use only cleaning agents and methods approved by B.PRO.
- Do not use any of the following cleaning agents or cleaning agents with the following ingredients on plastic parts:
  - Ethyl alcohol, isopropyl alcohol or higher alcohols
  - Acetone
  - Benzene
  - Turpentine
  - Acetic ester

Bringing stainless steel into contact with various substances can cause corrosion.

- Use only cleaning agents authorised by B.PRO.
- Never clean appliance parts/surfaces improperly (no abrasive cleaners, no pointed or sharp-edged objects, no cleaning agents containing solvents), as otherwise material damage may occur.
- Only clean appliance parts/surfaces with the authorised cleaning methods and agents.

#### The following cleaning agents are suitable for stainless-steel surfaces:

- Commercially available stainless steel cleaning agents without chlorides, such as *DeepClean Stainless Steel*
- Commercially available water-based cleaning agents which do not contain chlorides
- Use commercially available descaling agents based on organic acids or inorganic acids not harmful to stainless steel (such as acetic acid, citric acid, sulfamic acid, phosphoric acid); observe the safety data sheets for the cleaning agents.
- Soft cleaning cloth or damp microfibre cleaning cloth

A list of tested cleaning agents suitable for stainless steel is available from the German Swimming Pools Association (Deutsche Gesellschaft für das Badewesen e.V.) at [www.baederportal.com](http://www.baederportal.com) (Reinigungsmitteldatenbank/Liste RE). Further information on cleaning is available on the website of the information office for stainless steel, in the "Publications" section: [www.edelstahl-rostfrei.de](http://www.edelstahl-rostfrei.de)

#### Cleaning agents NOT suitable for stainless steel surfaces:

- All cleaning agents that may contain chlorides or hypochlorite (e.g. decalcifiers made with hydrochloric acid, chlorine bleaches)

#### Cleaning agents suitable for other metal surfaces, powder-coated appliance parts as well as plastic and glass parts:

- Commercially available water-based cleaning agents
- Soft cleaning cloth
- B.PRO microfibre cleaning cloth (use with water only)
- Residue stains, especially grease splashes and accumulations of grease, can be removed with a 30% soft soap solution and the help of a brush with synthetic or natural brushes.
- Glass surfaces can be cleaned with commercially available glass cleaners.

### **Cleaning agents - NOT suitable for other metal surfaces, powder-coated appliance parts as well as plastic and glass parts:**

- Stainless steel cleaning agents or other abrasive cleaning agents
- Floor cloth
- Solvent-based cleaning agents
- All cleaning agents that may contain chlorides or hypochlorite (e.g. decalcifiers made with hydrochloric acid, chlorine bleaches)
- Aggressive corrosion-inducing cleaning agents/disinfectants (such as those based on fluorinated silicic acid, phosphoric acid or hydrochloric and sulphuric acid)
- Pointed, sharp, metallic cleaning agents

### **Cleaning agents – suitable for eutectic plates (coolant accumulators) (optional)**

- Commercially available water-based cleaning agents
- Moist microfibre cleaning cloth for cleaning after each use
- Brush (plastic or natural bristles) for cleaning stubborn soiling
- Industrial dishwasher with a maximum of + 90 °C (water and drying temperature)

### **Cleaning agents – NOT suitable for eutectic plates (coolant accumulators) (optional)**

- Stainless steel cleaning agents or other abrasive cleaning agents
- Floor cloth
- Solvent-based cleaning agents
- All cleaning agents that may contain chlorides or hypochlorite (e.g. decalcifiers made with hydrochloric acid, chlorine bleaches)
- Aggressive corrosion-inducing cleaning agents/disinfectants (such as those based on fluorinated silicic acid, phosphoric acid or hydrochloric and sulphuric acid)
- Granule dishwasher

## **11.5 Cleaning the unit**

### **① B.PRO recommends:**

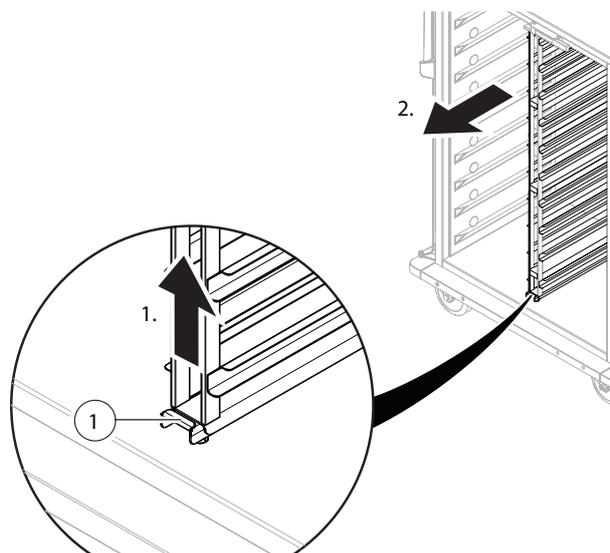
Before using chemical cleaning agents, always test their compatibility with the surface on a concealed area. This will prevent any unwanted discolouration or other reactions between cleaners and the surface.

- If mineral or metallic dust is picked up during cleaning, continuously rinse out the cleaning aids (such as brushes, micro-fibre cloths) so that traces of the dust particles cannot be deposited on the surface.
  - You must thoroughly rinse the surface with clean water and dry after every use.
  - Stainless-steel surfaces must be kept clean, dry and open to the air at all times.
- ✓ Unit has reached room temperature
  - ✓ Unit completely cleared out
  - Clean unit with cleaning methods and cleaning agents described above.
  - After using a stainless steel cleaning agent, wipe with clean water and rub dry.

## 11.6 Cleaning the interior body

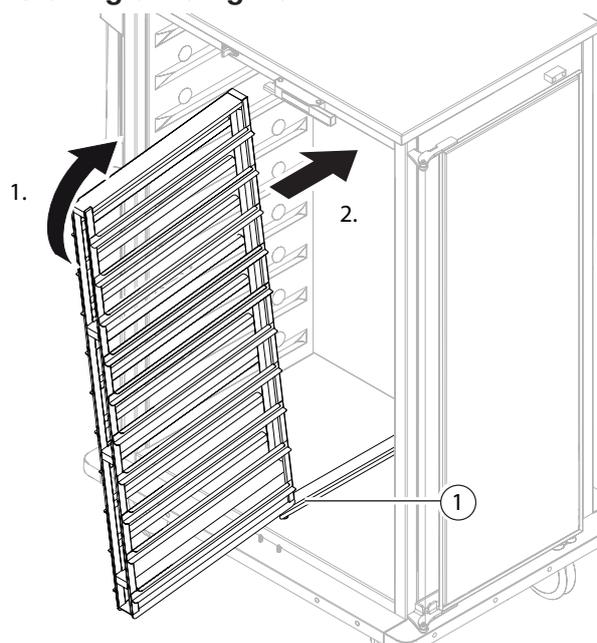
Unit model TTW-PK

### Removing dividing wall



- Open the unit doors.
- Remove condensation-water catch tray.
- ↪ "Empty condensation-water catch tray" on page 19
- Lift dividing wall (1.) until it is located above the lock on the guide profile (1).
- Pull out dividing wall forward (2.).
- Cleaning the interior body.
- ↪ "Cleaning the unit" on page 30

### Installing dividing wall



- Open unit doors
- Place dividing wall on the lower guide (1) and swing it up and into the trolley (1.) until it is vertical.
- Push dividing wall as far as possible toward the rear until the front edge catches in the lock on the guide profile.
- Insert condensation-water catch tray.
- ↪ "Empty condensation-water catch tray" on page 19

### Unit version H1 body (optional)

① Units of this design are suitable and approved for hose cleaning.

### Unit design H1 body and washing system, compatibility (optional)

① Units of this design are suitable and approved for hose cleaning and washing systems.

## 11.7 Maintenance

- ① Regular maintenance prevents failure of the unit, extends its operating life and contributes to general value retention.
- Have a suitably trained professional maintain the unit on a regular basis.
- Document the maintenance work that was performed and archive the associated documents accordingly.

### Checking the castor brakes

- Check the effectiveness of the castor brakes (any option) each time the device is moved.
- Apply the castor lock and then move the appliance slightly (do not force it!).
- If braking is inadequate, have the defective castor(s) replaced immediately by one of the following:
  - In-house, by B.PRO-trained professionals
  - External, B.PRO-trained customer service
  - [B.PRO Service](#)

### Checking unit doors

- Check the unit doors regularly for damage and deformation.
- Check the unit doors for proper opening and closing without blocking and jamming.
- If a defect is determined, have the defective parts immediately replaced by one of the following:
  - In-house, by B.PRO-trained professionals
  - External, B.PRO-trained customer service
  - [B.PRO Service](#)

### Inspecting door seal

- Check the door seal for damage and excessive deterioration after each cleaning (visual inspection).
- In case of damage, contact one of the following for repair:
  - In-house, by B.PRO-trained professionals
  - External, B.PRO-trained customer service
  - [B.PRO Service](#)

### Performing maintenance on seals

- Treat the seals regularly (monthly) with a commercially available care product.

## 12 Repairs

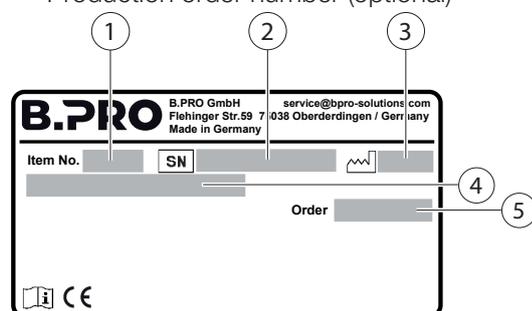
- Repairs should be performed **exclusively** by the following service centres:
  - In-house, by B.PRO-trained professionals
  - External, B.PRO-trained customer service
  - [B.PRO Service](#)

### 12.1 Fault description

① The rating plate is located on the side of the unit.

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)



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

- Defective components **may only** be replaced by the following service centres:
  - In-house, by B.PRO-trained professionals
  - External, B.PRO-trained customer service
  - [B.PRO Service](#)

### 12.2 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](http://www.bpro-solutions.com)).



### 12.3 Address

B.PRO GmbH  
Flehinger Straße 59  
75038 Oberderdingen  
Germany

Phone: +49 (0)7045 44 – 81416  
Fax: +49 (0)7045 44 – 81508  
E-mail: [service@bpro-solutions.com](mailto:service@bpro-solutions.com)  
Internet: [www.bpro-solutions.com](http://www.bpro-solutions.com)

### 12.4 Without being commissioned

① Repairs carried out by service centres not authorised by B.PRO invalidate the warranty.

## 13 Disposal

- **Do not** dispose of the appliance together with other commercial waste.
- Disable the unit and door locks before disposal.
- Take the fully emptied unit to a recycling centre.
- ① You can obtain further information on disposal from your dealer or the B.PRO Service Department.
- ↗ "Address" on page 33

## 14 Technical data

① Depending on the model, a unit subject to these operating instructions may also have differing technical data. The binding information is provided on the rating plate or the specific order documents or drawings.

### General data

#### Dimensions and weight (approximate)

Model	Length [mm]	Width [mm]	Height [mm]	Empty weight [kg]	Max. load [kg]
TTW 16 EN	1115	754	1365	*	96
TTW 20 EN	1115	754	1595	*	120
TTW 24 EN	1537	754	1365	*	144
TTW 30 EN	1537	754	1595	*	180
TTW 24 EN DZE	1115	754	1825	*	144
TTW 16 GN	1025	754	1365	*	96
TTW 20 GN	1025	754	1595	*	120
TTW 24 GN	1402	754	1365	*	144
TTW 30 GN	1402	754	1595	*	180
TTW 24 GN DZG	1025	754	1825	*	144
TTW 16 U	870	956	956	*	96
TTW 20 U	870	956	1595	*	120
TTW 32 U	1452	956	1365	*	192
TTW 40 U	1452	956	1595	*	240
TTW 16 EN PK	1115	754	1365	*	96
TTW 20 EN PK	1115	754	1595	*	120
TTW 24 EN PK	1657	854	1365	*	144
TTW 30 EN PK	1657	854	1595	*	180
TTW 24 EN PK DZE	1115	754	1825	*	144
TTW 16 GN PK	1025	754	1365	*	96
TTW 20 GN PK	1025	754	1595	*	120
TTW 24 GN PK	1402	754	1365	*	144
TTW 30 GN PK	1402	754	1595	*	180
TTW 24 GN PK DZG	1025	754	1825	*	144
TTW 32 U PK	1452	956	1365	*	192
TTW 40 U PK	1452	956	1595	*	240
TTW 16-115 EZE	1115	754	1365	84	96
TTW 20-115 EZE	1115	754	1595	94	120
TTW 24-115 EDE	1537	754	1365	158	144
TTW 30-115 EDE	1537	754	1595	162	180
TTW 16-115 EZG	1025	754	1365	80	96
TTW 20-115 EZG	1025	754	1595	90	120
TTW 24-115 EDG	1402	754	1365	150	144
TTW 30-115 EDG	1402	754	1595	154	180
TTW 16-115 EEU	870	956	956	**	96
TTW 20-115 EEU	870	956	1595	**	120
TTW 32-115 EZU	1452	956	1365	**	192
TTW 40-115 EZU	1452	956	1595	**	240
TTW 16-115 DZE	1115	754	1365	97	96

Model	Length [mm]	Width [mm]	Height [mm]	Empty weight [kg]	Max. load [kg]
TTW 20-115 DZE	1115	754	1595	110	120
TTW 24-115 DDE	1537	754	1365	175	144
TTW 30-115 DDE	1537	754	1595	182	180
TTW 24-115 DZE	1115	754	1825	145	144
TTW 16-115 DZG	1025	754	1365	92	96
TTW 20-115 DZG	1025	754	1595	105	120
TTW 24-115 DDG	1402	754	1365	170	144
TTW 30-115 DDG	1402	754	1595	174	180
TTW 24-115 DZG	1025	754	1825	**	144
TTW 16-115 DEU	870	956	956	**	96
TTW 20-115 DEU	870	956	1595	**	120
TTW 32-115 DZU	1452	956	1365	**	192
TTW 40-115 DZU	1452	956	1595	**	240
TTW-PK 16-115 DZE	1115	754	1365	**	96
TTW-PK 20-115 DZE	1115	754	1595	**	120
TTW-PK 24-115 DDE	1657	854	1365	**	144
TTW-PK 30-115 DDE	1657	854	1595	**	180
TTW-PK 24-115 DZE	1115	754	1825	**	144
TTW-PK 16-115 DZG	1025	754	1365	**	96
TTW-PK 20-115 DZG	1025	754	1595	**	120
TTW-PK 24-115 DDG	1402	754	1365	**	144
TTW-PK 30-115 DDG	1402	754	1595	**	180
TTW-PK 24-115 DZG	1025	754	1825	**	144
TTW-PK 32-115 DZU	1452	956	1365	**	192
TTW-PK 40-115 DZU	1452	956	1595	**	240

\* For configuration items, the empty weight depends heavily on the configuration scope of the item. The mandatory information is provided on the rating plate or in the specific order documents and/or on drawings.

\*\* The data were not yet available at the time of publication. The mandatory information is provided on the rating plate or in the specific order documents and/or on drawings.

**Dimensions and weights (approx.) – Changes due to option**

Model	Length in mm	Width in mm	Height in mm	Empty weight in kg
Railing	1050 – 1274	570 – 776	110	1.5 – 3
Top bumper rail	869 – 1636	750 – 842	35	7.5 – 22
Draw bar and coupling	766 – 1430	640 – 845	591	12 – 14
Central brake	227	626 – 831	197	5
Central directional lock	245	626 – 831	195	6
Central brake with central directional locking device	897 – 1121	626 – 831	197	11

**Number of unit compartments and tray capacity**

Model	Number of unit compartments	Capacity GN = Gastronorm EN = Euronorm
TTW 16 EN TTW 16 EN PK TTW-PK 16-115 DZE TTW 16-115 EZE TTW 16-115 DZE	2	16 EN
TTW 20 EN TTW 20 EN PK TTW 20-115 EZE TTW 20-115 DZE TTW-PK 20-115 DZE	2	20 EN
TTW 24 EN TTW 24 EN DZE TTW 24-115 EDE TTW 24 EN PK TTW 24 EN PK DZE TTW 24-115 DDE TTW 24-115 DZE TTW-PK 24-115 DDE TTW-PK 24-115 DZE	3	24 EN
TTW 30 EN TTW 30 EN PK TTW 30-115 EDE TTW 30-115 DDE TTW-PK 30-115 DDE	3	30 EN
TTW 16 GN TTW 16 GN PK TTW 16-115 EZG TTW 16-115 DZG TTW-PK 16-115 DZG	2	16 GN
TTW 20 GN TTW 20 GN PK TTW 20-115 EZG TTW 20-115 DZG TTW-PK 20-115 DZG	2	20 GN
TTW 24 GN TTW 24 GN DZG TTW 24 GN PK TTW 24 GN PK DZG TTW 24-115 EDG TTW 24-115 DDG TTW 24-115 DZG TTW-PK 24-115 DDG TTW-PK 24-115 DZG	3	24 GN
TTW 30 GN TTW 30 GN PK TTW 30-115 EDG TTW 30-115 DDG TTW-PK 30-115 DDG	3	30 GN

Model	Number of unit compartments	Capacity GN = Gastronorm EN = Euronorm
TTW 16 U TTW 16-115 EEU TTW 16-115 DEU	1	16 EN or 16 GN or 16 compact trays
TTW 20 U TTW 20-115 EEU TTW 20-115 DEU	1	20 EN or 20 GN or 20 compact trays
TTW 32 U TTW 32 U PK TTW 32-115 EZU TTW 32-115 DZU TTW-PK 32-115 DZU	2	32 EN or 32 GN or 32 compact trays
TTW 40 U TTW 40 U PK TTW 40-115 EZU TTW 40-115 DZU TTW-PK 40-115 DZU	2	40 EN or 40 GN or 40 compact trays

### Load-bearing capacity

Component	Permitted surface load [kg]
Unit top	20

### Support beads

Parameter	Values
Spacing of support beads	115 mm

### Environment

#### Ambient conditions – operation

Parameter	Values
Temperature	+15 °C to +38 °C
Relative humidity	without condensation

#### Ambient conditions – storage, transport

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

### Materials

Parameter	Values
Material	Stainless steel, synthetic
Insulating material	PUR foam panels

## 15 Ordering information and accessories

### Ordering information

Designation / Article	Article number / Document number
TTW 16 EN	390231
TTW 20 EN	390232
TTW 24 EN	390233
TTW 30 EN	390234
TTW 24 EN DZE	390253
TTW 16 GN	390235
TTW 20 GN	390236
TTW 24 GN	390237
TTW 30 GN	390238
TTW 24 GN DZG	390254
TTW 16 U	390239
TTW 20 U	390240
TTW 32 U	390241
TTW 40 U	390242
TTW 16 EN PK	390243
TTW 20 EN PK	390244
TTW 24 EN PK	390245
TTW 30 EN PK	390246
TTW 24 EN PK DZE	390255
TTW 16 GN PK	390247
TTW 20 GN PK	390248
TTW 24 GN PK	390249
TTW 30 GN PK	390250
TTW 24 GN PK DZG	390256
TTW 32 U PK	390251
TTW 40 U PK	390252
TTW 16-115 EZE	575553
TTW 20-115 EZE	575554
TTW 24-115 EDE	575555
TTW 30-115 EDE	575556
TTW 16-115 EZG	575557
TTW 20-115 EZG	575558
TTW 24-115 EDG	575559
TTW 30-115 EDG	575560
TTW 16-115 EEU	575561
TTW 20-115 EEU	575562
TTW 32-115 EZU	575563
TTW 40-115 EZU	575564
TTW 16-115 DZE	575565
TTW 20-115 DZE	575566
TTW 24-115 DDE	575567
TTW 30-115 DDE	575568
TTW 24-115 DZE	575587
TTW 16-115 DZG	575569

Designation / Article	Article number / Document number
TTW 20-115 DZG	575570
TTW 24-115 DDG	575571
TTW 30-115 DDG	575572
TTW 24-115 DZG	575588
TTW 16-115 DEU	575573
TTW 20-115 DEU	575574
TTW 32-115 DZU	575575
TTW 40-115 DZU	575576
TTW-PK 16-115 DZE	575577
TTW-PK 20-115 DZE	575578
TTW-PK 24-115 DDE	575579
TTW-PK 30-115 DDE	575580
TTW-PK 24-115 DZE	575589
TTW-PK 16-115 DZG	575581
TTW-PK 20-115 DZG	575582
TTW-PK 24-115 DDG	575583
TTW-PK 30-115 DDG	575584
TTW-PK 24-115 DZG	575590
TTW-PK 32-115 DZU	575585
TTW-PK 40-115 DZU	575586
Operating instructions	154667

**Accessories**

Designation / Article	Article number / Document number
Gastronorm/Euronorm/compact tray	↳ B.PRO price list
Dishes	↳ B.PRO price list
Cloches	↳ B.PRO price list
Article numbers	↳ B.PRO price list
Eutectic plates	↳ B.PRO price list
B.PRO microfibre cleaning cloth	126999
DeepClean Stainless Steel cleaning and care agent	511895

## 16 Standards, guidelines, inspection seal

The unit is in compliance with the fundamental requirements specified in the applicable product standards in their latest version when it is delivered.

### 16.1 Directives for CE marking/EU declaration of conformity

Where applicable, the unit is in compliance with the fundamental requirements specified in the following regulations/guidelines in their latest version when it is delivered.



- 1935/2004: Regulation on materials and articles intended to come into contact with food
- 2006/42/EC: Machinery Directive
- 2014/35/EU: Low Voltage Directive
- 2014/30/EU: EMC Directive
- 2011/65/EU: RoHS Directive
- 2014/68/EU: Pressure Equipment Directive

### 16.2 Rules, regulations

The following rules, regulations, German Employers' Liability Insurance Association rules and any other applicable provisions for countries of use must be observed in their latest version when handling and using this unit.

- EC No. 852/2004: Regulation on the hygiene of foodstuffs
- DGUV regulation 110-003: Kitchen industry
- DGUV Regulation 3: Accident prevention regulations for electrical facilities and devices

① You can obtain a copy of the EU declaration of conformity from the B.PRO [Service/Sales Team](#) on request.







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