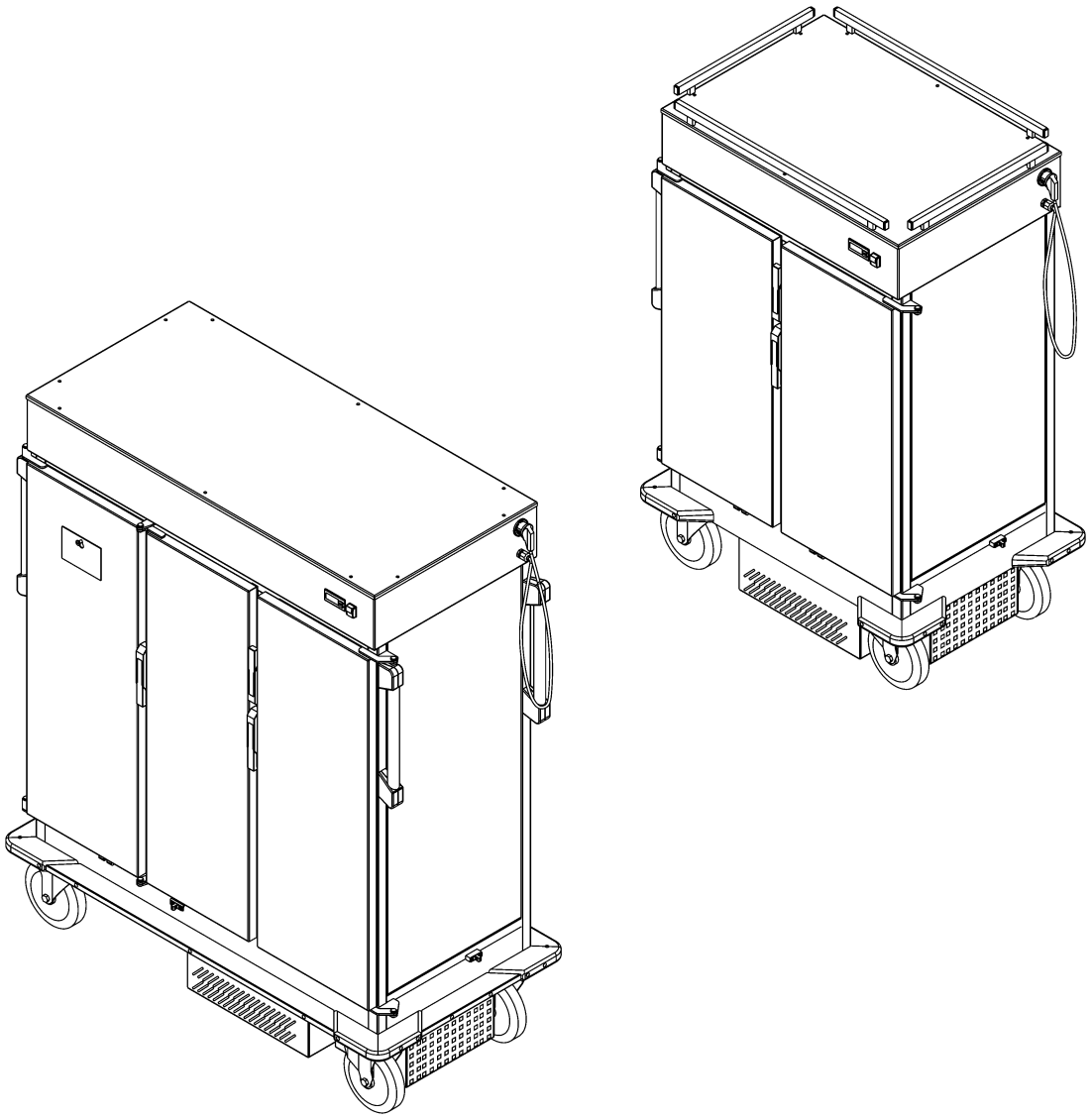
BLANCO



BLANCO INMOTION
Cooled Tray Transport Carts
TTW-FK 16-105/115 DSZE, TTW-FK 20-105/115 DSZE, TTW-FK 24-105/115 DSDE, TTW-FK 30-105/115 DSDE

Operating instructions

General information

Warranty

This unit was manufactured with care using high-quality materials and modern production techniques.

The period of warranty from the date of purchase for this unit is 24 months and for wearing parts and electrical parts six months. The warranty encompasses all the malfunctions and faults arising through the material and manufacturing. Malfunctions and faults caused by improper handling and external influences are excluded. Justified complaints are eliminated free of charge within the warranty period.

Your right to warranty is proven by the purchase receipt bearing the date of purchase. Our terms of business and delivery also apply.

Copyright

Technical modifications

Subject to modifications for the purpose of technical improvement.

Product documentation

Operating instructions; Target group: operating personnel, kitchen directors.

Typographical conventions

☞ Important **notes** on particularities 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.

Unit variant XYZ

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

Warnings

⚠ **Signal word!**

Type and source of danger

Possible consequences of noncompliance 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 highly severe/fatal bodily injuries.

Contents

About this product

Application

The cooled BLANCO INMOTION Tray Transport Cart was designed for keeping food cool and transporting it on Gastronorm/Euronorm trays.

The cooled BLANCO INMOTION Tray Transport Cart is not suitable for cooling down warm dishes and food. It may not be used as a room cooler.

The cooled BLANCO INMOTION Tray Transport Cart is particularly suitable for use in social facilities (clinics, retirement homes, day care centers), hotels, the food service industry (banquets, party services) and in cafeterias (canteens, dining halls), e.g. for advanced evening portioning.

Conditions of use

Environment

The unit may be used when the surrounding 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

The cooled BLANCO INMOTION Tray Transport Cart is made of stainless steel as standard.

The unit body is double-walled and insulated. The units have either two or three compartments. The front of the unit is closed via two or three double-walled, insulated unit doors. The unit doors have been provided with a snap-in lock.

As standard, the transportation mechanism of the tray transport carts with two or three compartments consists of two steering castors with locking brakes and two fixed castors.

The cooled BLANCO INMOTION Tray Transport Cart is equipped with active convection cooling.

The unit designation contains an abbreviation of the unit model. TTW stands for tray transport cart, F for hinged door, K for cooling. The subsequent numbers and letters have the following meaning:

- The first and second digits refer to the tray capacity (16, 20, 24, 30 trays), e. g. TTW-FK **16**-115 DSZE.
- The third, fourth and fifth digits specify the spacing of the support ledges (105, 115 mm), e. g. TTW-FK 16-**115** DSZE.
- The first letter indicates the design of the walls (D = double-walled), e. g. TTW-FK 16-115 **D**SZE.
- The second letter stands for ledges (S = ledges), e. g. TTW-FK 16-115 D**S**ZE.
- The third letter stands for the number of compartments (Z = 2 compartments, D = 3 compartments), e. g. TTW-FK 16-115 DS**Z**E.
- The last letter stands for the tray type (E = Euronorm trays), e. g. TTW-FK 16-115 DSZ**E**.

Operation

Vertical push handles allow easy movement of the unit. Stable corner guards protect the unit from damage. Circumferential impact protection strips are available as an option.

The unit doors can be locked to the short sides. On the three-compartment unit, the central door is locked to the long side.

The inner side walls are designed with support ledges for accepting trays. Two indentations are found above each set of support ledges. They prevent accidental tipping when removing the tray.

The trays can be inserted with the short side in front.

Cooling is started and ended with the on/off switch on the front of the unit. The unit is equipped with a temperature regulator.

The refrigeration parameters for cooling can be set by the degree via a temperature regulator with a digital temperature display. LEDs on the control panel of the temperature regulator show the current operating status of the unit.

The temperature regulator registers deviations of the actual temperature from the setpoint temperature outside a preset temperature range and signals them via a visual signal.

The temperature range of the temperature regulator lies between +4 °C and +12 °C.

Standard model

The standard model of the cooled BLANCO INMOTION Tray Transport Cart includes:

- double-walled unit body made of stainless steel
- two to three compartments, depending on the model
- ledge spacing 115 mm
- two push handles on the left short unit side (seen from the operator side)
- four corner guards
- two steering castors with a locking brake and two fixed castors
- castor arrangement "A": castors at the unit corners

Options and accessories

The cooled BLANCO INMOTION Tray Transport Cart is available with the following optional equipment:

- all-around railing
- two additional push handles on the right short unit side (seen from the operator side)
- circumferential impact protection strip
- lockable unit doors
- menu holder
- ledge spacing 105 mm
- castor model available in different materials
- waste system

Functional principle

Description

The cooled BLANCO INMOTION Tray Transport Cart is equipped with active convection cooling. Convection cooling operates based on the following principle:
The evaporator of the refrigeration system extracts heat from the air inside the unit. A fan causes the cooled air to circulate in the unit. This functional principle results in:

- quick cooling of the unit interior
- lower cooling temperature (+4 °C) than possible with active motionless refrigeration
- even distribution of temperature

The unit interior has a drainage facility for condensation water which collects in the condensation-water catch tray.

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 you use the unit for the first time.

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.

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 its operation and must have read and understood these operating instructions.

Transportation

Upright transport position

Transport the unit in an upright position only.

Transportation with a truck or delivery vehicle

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

Secure against the shifting of the unit. Do not place a tension belt around the sliding handles. The handles can be bent.

Secure the unit against vertical movement during transportation. Just locking the brakes is insufficient transportation security.

Use padded safety bars.

Startup

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.

If the unit is connected to the power the moisture film may cause a short-circuit or an electric shock.

Keep ventilation slits of refrigeration unit clear. Ventilation slits must be at least 10 cm from a wall with the refrigeration unit switched on. Blocked ventilation slits can lead to overheating and failure of the refrigeration unit.

Startup after a storage period

When the unit is brought from a cold storage room into a kitchen, moisture from the air in the room will form on the surfaces and the inside the unit.

If the unit is connected to the power the moisture film may cause a short-circuit or an electric shock.

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

Mains connection

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

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

Insert and remove power plug only while unit is switched off, as otherwise the unit electronics can be damaged.

Always unplug the plug at the power plug housing.

Operation

General information

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

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 at one of the following locations:

- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service

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

When keeping food cool, only open the unit briefly to remove food.

Always keep cloches on food in Euronorm trays.

Loadability of unit top

Do not place items with an area load exceeding 25 kg on top of the unit.

Hygiene regulations

When keeping food cool, observe the relevant regulations on foodstuffs as well as the characteristics of the food in question.

Danger of children being trapped inside

Secure empty tray transport cart from children. Children who climb into an empty tray transport cart and lock the unit door cannot get out unassisted. Place the empty tray transport cart with the unit door side toward the wall or place it in an area inaccessible to children.

Change of location

Remove any objects from the unit top before changing its location. Objects can slide off the unit top when pushing the unit.

Hold unit doors closed while changing its location. Trays can fall out of the unit when it is pushed.

With the doors closed, the unit can be tilted to an angle of 10°. Only sloping surfaces should be crossed with tilt of <10°.

To prevent the risk of damage to the underside of the unit (cooling) and the castors:

- Do not move the unit when the locking 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.

When moving the unit, ensure that no persons or objects which are located in the way of the unit are overlooked.
If the person pushing the unit cannot see over it, a second person must walk in front of the unit when it is being moved to ensure that it can be moved forward safely.

Always push the unit using both hands. Depending on the weight of the unit, if you push it with just one hand it is possible you would not be able to apply the brakes quickly enough.

Be careful to ensure that your hands are not pinched (danger of crushing) between the push handles and walls or other objects (e.g. cabinets).

Two people are required to move the unit over ramps or sunken areas (one at each short side of the unit).

Shutting down

Unplugging the power plug

Insert and remove power plug only while unit is switched off, as otherwise the unit electronics can be damaged.

Cleaning and care

Power plug

Unplug the power plug before cleaning the unit. Water seeping into the unit can cause a short-circuit. If this happens, there is a risk of death by electric shock.

Hygiene

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

The unit fulfills the requirements of the hygienic design HS.

Cleaning frequency

Clean the unit thoroughly after each use.

The unit is equipped with an automatic defroster and a condensation-water catch tray. The condensation-water catch tray is to be emptied manually after each use.

Cleaning methods

Use only approved cleaning methods.

Do not use a steam jet device or high-pressure cleaner.

Cleaning water

Thoroughly dry the unit after cleaning. Remove cleaning water from the floor of the unit interior.

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

Completely wipe up any water which runs out of the unit.

Maintenance

Locking brakes

Regularly check the effectiveness of the locking brakes.

If the effectiveness of the brakes is not sufficient, have the defective castor replaced immediately by one of the following:

- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service

Unit doors

Check the door seal for damage and aging after each cleaning (visual check).

Electrical safety: Re-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 0702 series of standards.

Connection cable and power plug

At least once every six months check the cable and power plug for mechanical damage and signs of excessive aging in accordance with BGV A 2 or the corresponding national regulations.

Repairs

Authorized persons

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

- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service
- For repairs to the refrigeration system: Specialist refrigeration engineers

The warranty will be invalidated if the unit is repaired by anyone else.

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.

Transportation

Checking for / reporting on damage incurred during transportation

☞ It is imperative that the unit be checked immediately after delivery for damage incurred during transportation (visual inspection).

➨ Record on the waybill (description of defect) any damage incurred during transportation, doing so in the presence of the carrier.

➨ Have the carrier confirm the damage (signature).

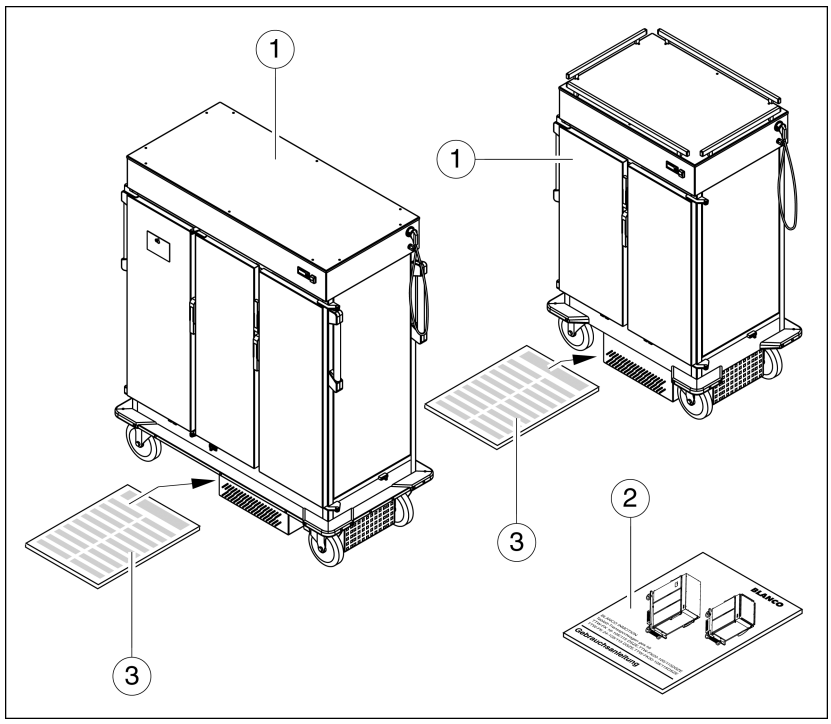
➨ Retain the unit and notify BLANCO of the damages with the waybill.

- or -

Do not accept the unit and return it to BLANCO via the deliverer.

☞ This procedure will ensure correct processing of claims. If transportation damage is reported later the consignee must provide evidence of this.

Scope of delivery



(1) BLANCO INMOTION Cooled Tray Transport Cart
(2) Operating instructions
(3) Operating instructions on temperature regulator (in machine compartment behind the revision panel)

The scope of delivery and model of the cooled BLANCO INMOTION Tray Transport Cart are to be taken from the delivery documentation.

Unpacking

➨ Open the transportation packaging at the places provided. Do not rip or cut it!

➨ Check the scope of delivery.

Disposing of packaging material

☞ Packaging materials can be handed over to a recycling center after quoting the disposal contract number. If the applicable disposal contract number is not available, this can be obtained by contacting BLANCO.

➡ Dispose of packaging material correctly and in an environmentally responsible manner.

Startup

Prerequisites for operation

- ✓ The unit has reached room temperature and is dry
- ✓ There is no remaining film or film remains on the unit
- ✓ The unit is clean
- ✓ The unit and power plug have no known defects or visible damage
- ✓ The locking brakes are locked

Initial startup

Checking setpoint temperature of the unit

☞ The setpoint temperature used by the unit's temperature regulator is set at the factory to +7 °C.

➥ Change the setpoint temperature if necessary.

↳ Subsection "Setting the setpoint temperature" on Page 14.

Connecting the unit

Positioning the unit

➥ To ensure the best possible cooling of the food, note the following points when selecting where to place the unit:

- Operate the unit far away from possible heat sources (such as radiators, ovens, sunlight)
- Operate the unit far away from equipment which develops large amounts of steam (e.g. dishwasher).

➥ Ensure that the ventilation slits of the refrigeration unit are not covered by anything (unimpeded exit of air). Ventilation slits must be at least 10 cm from a wall with the refrigeration unit switched on.

➥ Make sure that the condensation-water catch tray is pushed in inside the unit.

➥ Move the unit into its designated location and lock the brakes.

↳ Subsection "Moving the unit to a new location" on Page 18.

➥ Before switching on, make sure the unit interior is in an absolutely hygienic state.

Plug the unit into an electrical outlet

✓ The unit is switched off

⚠ Caution!

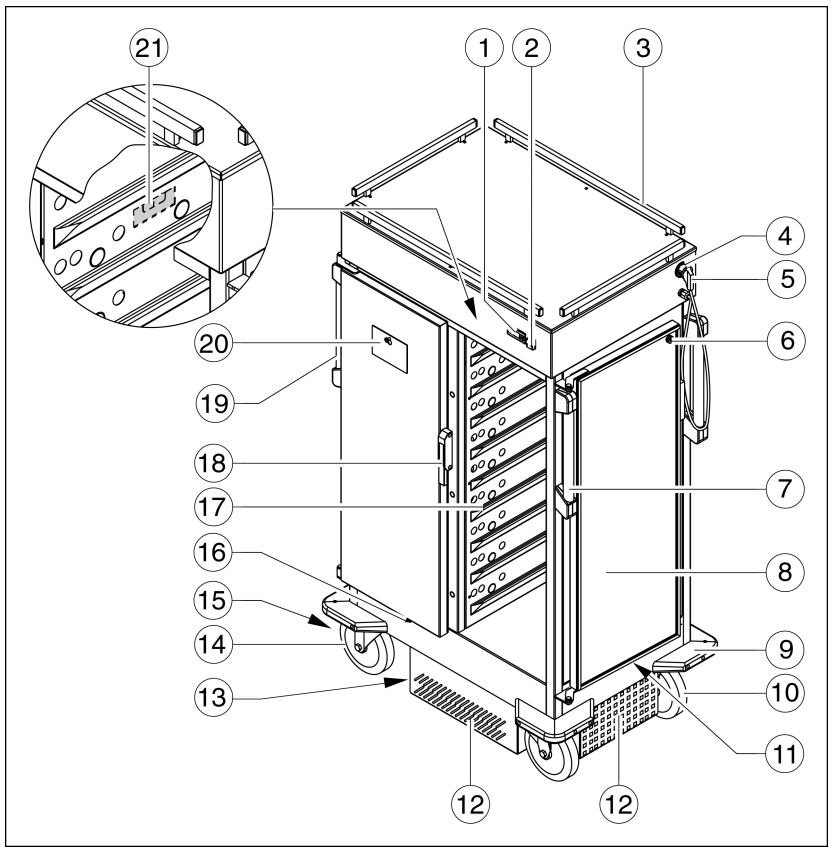
Damage to property due to improper mains connection!
If the unit is not rated for the mains voltage or frequency which is available, the unit's electronics may suffer permanent damage.

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

➥ Plug the power plug into the electrical outlet.

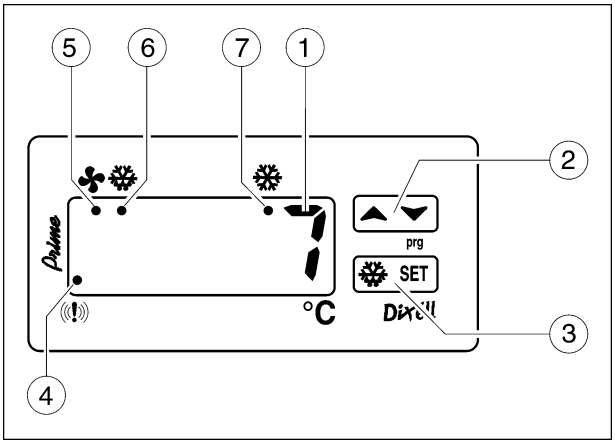
Operation

Unit overview



(1) Temperature regulator
(2) On/off switch
(3) Float rail (optional)
(4) Power plug retainer
(5) Power plug
(6) Magnet for door contact
(7) Push handle
(8) Unit door: locked at side wall
(9) Corner guard
(10) Fixed castor
(11) Door lock (counterpart to door catch)
(12) Ventilation slits of the machine compartment for cooling
(13) Machine compartment revision panel
(14) Steering castor
(15) Locking brake
(16) Door catch (for locking the unit door to the short side)
(17) Support ledge
(18) Door handle
(19) Push handle
(20) Menu card holder with menu card (both optional)
(21) Condensation-water catch tray (at top of right-hand inner wall of left or center compartment)

Overview of temperature regulation



(1) Temperature display:
shows the actual temperature in the unit, setpoint temperature, minimum/maximum temperatures for temperature undershoot/ overshoot, duration of a temperature undershoot/overshoot, information messages.

(2) Button rocker "Up/Down arrow":
increases/decreases parameter values.

(3) Button rocker "Manual defrost/SET":
starts manual defrosting/starts programming mode.

(4) "Alarm" signal LED:
illuminates when unit drops below or exceeds the setpoint

(5) "Fan" operation indicator LED:
illuminates when the fan is in operation.

(6) "Defrosting" operation indicator LED:
illuminates while defrosting.

(7) "Refrigeration unit" operation indicator LED:
illuminates when the refrigeration unit is in operation.

☞ The "Alarm" signal LED illuminates during an alarm or after an alarm until the alarm is reset. The alarm can only be reset if the temperature overshoot/undershoot is no longer in effect. Interrupting the power supply is not an option for resetting the alarm indication. Alarm indications are saved and must be reset manually.

↳ Subsection "Resetting a saved alarm" on Page 22.

☞ A magnet is screwed on inside the doors at the top and functions as a door contact. "Da" flashes in the display while a door is open.

↳ Subsection ""Da" flashes in the display of the temperature regulator" on Page 26.

Switching cooling on and off

☞ The temperature regulator is only functional if cooling is activated.

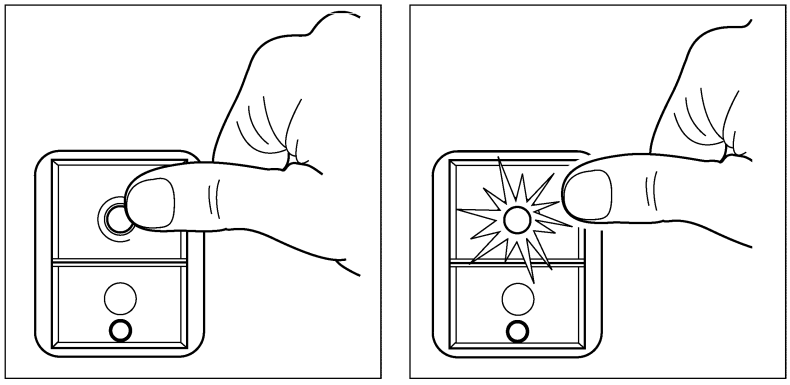
☞ The "Refrigeration unit" operation indicator LED illuminates while the refrigeration unit is running. As soon as the set setpoint temperature is reached, the refrigeration unit switches off until the actual temperature has risen by a preset amount. The "Refrigeration unit" operation indicator LED goes out during this time. The fan is still in operation.

☞ As soon as cooling is activated, the fan runs uninterrupted. Operation of the fan is only interrupted if a door is opened.

Activating cooling

✓ Unit connected to electrical mains

➨ Start cooling with the on/off switch.
The operation indicator LED of the on/off switch illuminates.



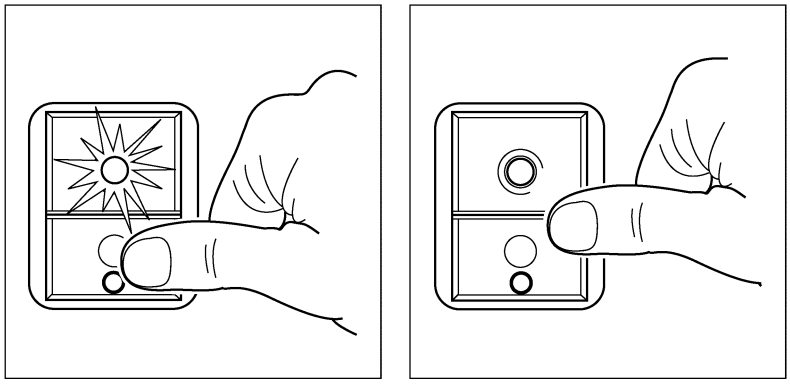
"---" appears briefly in the display of the temperature regulator.

The current temperature inside the unit is then displayed.

The temperature on the interior of the unit is lowered depending on the set setpoint temperature.

Deactivating cooling

➨ End cooling with the on/off switch.
The operation indicator LED of the on/off switch goes out.



Setting the setpoint temperature

☞ When cooling is active, the standard display shows the actual temperature inside the unit.

Displaying the setpoint temperature

☞ The setpoint temperature is set to +7 °C at the factory. If too low a temperature is set this will result in the refrigeration unit running permanently (as will also happen when the ambient temperature is too high). Possible consequences:

- Ice will build up more quickly on the evaporator
- Defrosting necessary often
- More energy will be consumed

✓ Unit connected to electrical mains

✓ Cooling activated (The operation indicator LED of the on/off switch illuminates)

✓ Actual temperature is shown in the display

SET

➨ Press "SET" button briefly.

Setpoint temperature is displayed. The actual temperature appears in the display after approx. 5 sec. or if the "SET" button is pressed again.

Changing the setpoint temperature

✓ Unit connected to electrical mains

✓ Cooling activated (The operation indicator LED of the on/off switch illuminates)

SET

➨ Press and hold the "SET" button for approx 2 sec.

The setpoint temperature is displayed and the "Refrigeration unit" operation indicator LED flashes.

➨ Use the "Up arrow" button to raise the setpoint temperature.

- or -

➨ Use the "Down arrow" button to lower the setpoint temperature.

☞ If the "Up arrow" or "Down arrow" button is pressed and held, the temperature setting changes continuously.
The rate of change increases when the "Up arrow" or "Down arrow" button is held down longer.

SET

➨ To save the changed setpoint temperature press the "SET" button briefly.

- or -

Wait approx. 5 seconds.

The setpoint temperature is saved, the "Refrigeration unit" operation indicator LED stops flashing and illuminates when the unit is cooling.

The actual temperature inside the unit is displayed.

Defrosting the unit manually

☞ The unit performs automatic defrosting for 15 min. every 6 hours. Additional manual defrosting is only necessary if the actual temperature increasingly deviates upward from the set setpoint temperature.

☞ Usually it will suffice to allow the unit to defrost (15 min.) by starting manual defrosting. It may occasionally be necessary to switch off the unit for defrosting for approx. 24 hours. Both cases are described in more detail below.

➨ To start defrosting manually, press the "Defrost" button for approx. 2 seconds.
Cooling is stopped and defrosting starts.
The "Defrosting" operation indicator LED illuminates.

i Defrosting is helped by the fan.

i To interrupt manual defrosting, it must be ended via the on/off switch for cooling.

i After the preset time for manual defrosting time has passed (15 min.), the unit automatically switches back to cooling mode. Defrosting has now been completed.

☞ If defrosting does not cure the problem (one of the symptoms described above is still present), you will need to shut down cooling for an extended period. The procedure to follow in this case is described below:

➨ End cooling with the on/off switch.
Cooling is ended.

➨ Leave cooling switched off for **24 hours**.

➨ Empty the condensation-water catch tray if necessary.

➨ Clean the unit.

↳ Subsection "Cleaning the unit" on Page 30.

Locking and unlocking the keyboard

Locking the keyboard

☞ The keyboard lock protects against unauthorized access to cooling, e.g. setting of the setpoint temperature.

☞ Only the following functions can be executed when the keyboard is locked:

- Displaying the setpoint temperature
- Resetting the alarm indication
- Displaying the minimum/maximum temperature in case of alarm

➨ Press and hold both buttons of the button rocker "Up/Down arrow" for approx. 3 sec.
The "PoF" display appears briefly. The actual temperature is then displayed.

Unlocking the keyboard

➨ Press and hold both buttons of the button rocker "Up/Down arrow" for approx. 3 sec.
The "Pon" display appears briefly. The keyboard is unlocked. The actual temperature is then displayed.

Pre-cooling the unit

i To prevent warming up of the pre-cooled food, the unit must be pre-cooled for 30 to 60 min., depending on the ambient temperature.

☞ The "Refrigeration unit" operation indicator LED illuminates while the refrigeration unit is running. As soon as the set setpoint temperature is reached, the refrigeration unit switches off until the actual temperature has risen by a preset amount. The "Refrigeration unit" operation indicator LED goes out during this time. The fan is still in operation.

✓ Unit connected to electrical mains

✓ Cooling activated and the operation indicator LED of the on/off switch illuminates

➨ Start cooling with the on/off switch approx. 30 to 60 min. before loading.
↳ Subsection "Switching cooling on and off" on Page 13.

➨ Change the setpoint temperature if necessary.
↳ Subsection "Setting the setpoint temperature" on Page 14.

Opening a unit door

☞ To keep the loss of coolness to a minimum, do not open the doors unnecessarily while cooling is active.

☞ The temperature regulator is only functional if cooling is activated.

☞ If one or more doors are opened during cooling, it switches off automatically for at least 3 minutes. Cooling and ventilation switch/remain off as long as (at least) one door is open. "Da" flashes in the display while a door is open. Ventilation switches on again as soon as the door is closed. Cooling switches on when the door is closed if the door was open for longer than 3 min. and the setpoint temperature is not reached.

⚠ **Caution!**

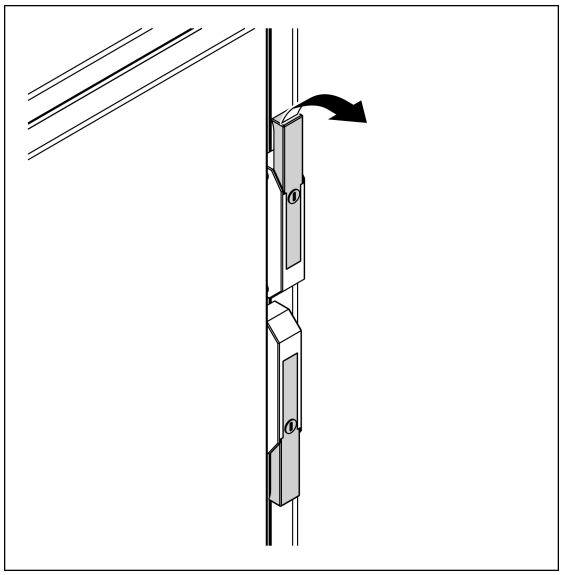
Hand can be pinched!
Your hands can be pinched to the side walls and injured when locking the unit door.

➨ Do not put your hand between the unit door and the unit or hold it there when locking.

➨ Carefully open and lock the unit door (without momentum).

➨ If the unit door is locked, unlock the lock with a key.

➥ Pull the door handle on the door lock in the direction of the arrow and open the unit door.



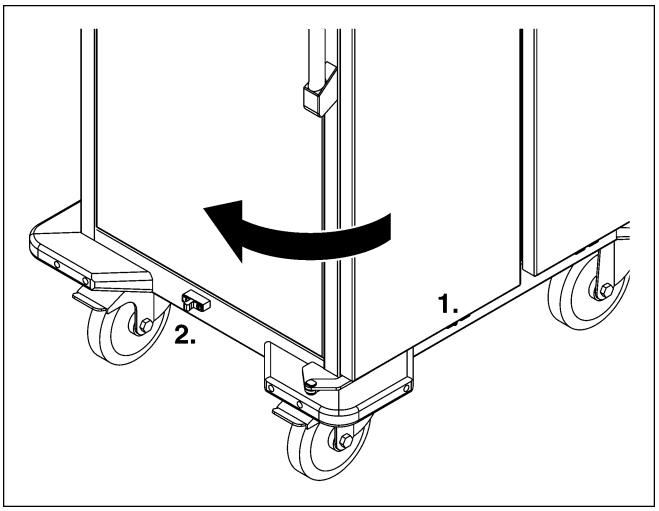
Refrigeration unit and ventilation switch off.

The "Da" display flashes.

The "Refrigeration unit" and "Fan" operation indicator LEDs go out.

➥ 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.) .



Closing the unit door

☞ The temperature regulator is only functional if cooling is active.

⚠ Caution!

Hand can be pinched!

Your hands can be pinched and injured when the unit door is being closed.

➥ Do not put your hand between the unit door and the unit or hold it there when closing.

➥ Carefully close the unit door (without momentum).

➥ Pull the unit door out of the door lock.

➥ Close unit door without momentum.

- Press the unit door into the lock until it is felt to engage.
  The fan switches on again. The "Fan" operation indicator LED illuminates.
  The refrigeration unit switches on again if the door was open longer than 3 minutes or after 3 minutes, calculated from the time the door was opened and if the temperature inside the unit has risen by the preset amount.
  The "Da" display goes out.
  The "Refrigeration unit" operation indicator LED illuminates.

Loading the unit

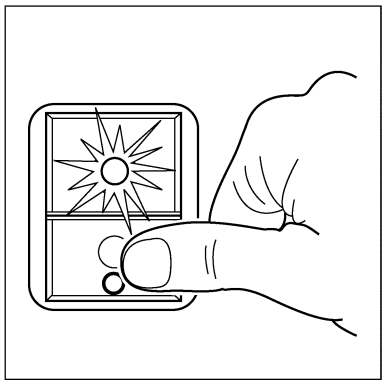
☞ Always insert the food pre-cooled. The unit is only suitable for keeping food cool, not for cooling food down.

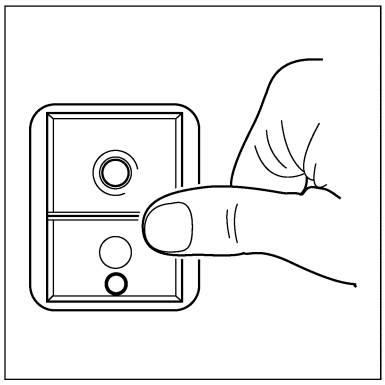
- ✓ Pre-cooled food on Euronorm tray
- ✓ Food on Euronorm trays is covered with cloches
- ✓ Door seal clean and undamaged
- Open unit door(s).
  ↳ Subsection "Opening a unit door" on Page 16.
- To prevent shifting of the center of gravity to the unit top, load the unit from the bottom up when loading partially.
- Insert tray up to rear wall.
- Close unit door(s).
  ↳ Chapter "Closing the unit door" on Page 17.

Moving the unit to a new location

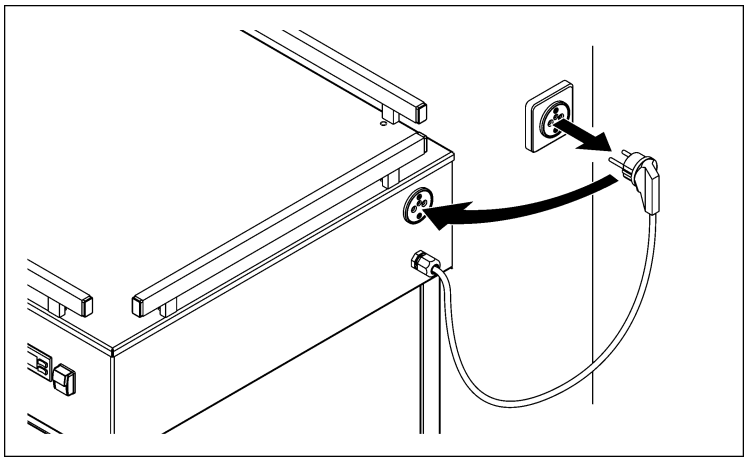
Switching the unit off

- Switch off cooling with the on/off switch.
  The operation indicator LED of the on/off switch goes out.





➥ Unplug the power plug and insert it into the power plug retainer.



Change of location

☞ If the driving route is uneven, measures must be taken.

↳ Chapter "Traversing ramps, recesses and slanted surfaces" on Page 21.

✓ Do not place objects on top of the unit

✓ Unit door(s) closed

✓ Two people

⚠ Caution!

Be careful not to jam your foot!
Your foot can be pinched and injured when you release or lock the locking brake.

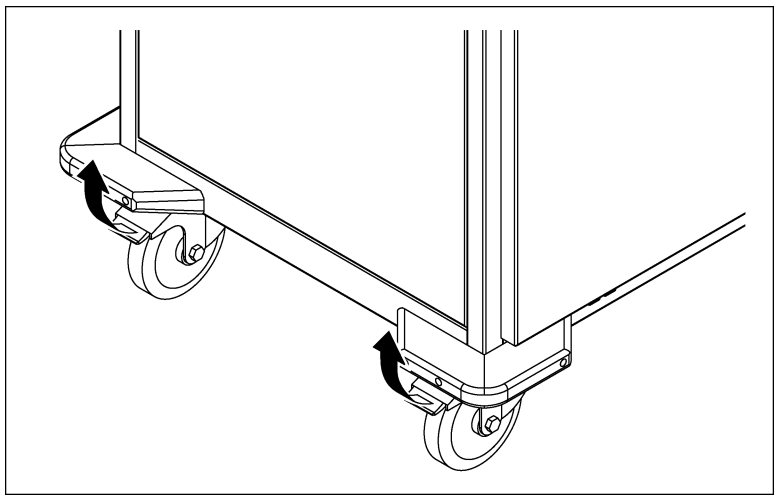
➥ Be careful not to place your foot between the locking brake and the corner guard.

⚠ Warning!

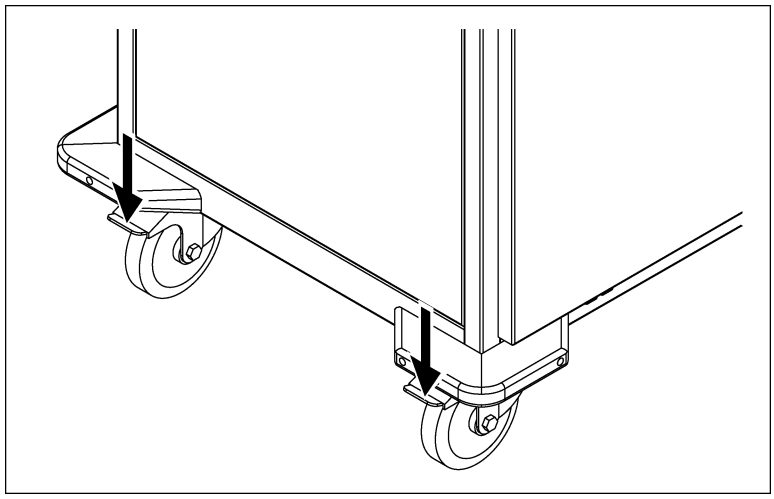
Limited visibility!
When pushing the unit, a person in front of the unit can be overlooked and injured. The unit or an object before the unit can be damaged due to limited visibility.

➥ Make sure that another person walks ahead of the unit when pushing.
➥ Always push the unit using both hands.
➥ Push the unit so that your hands on the push handles are a sufficient distance from the wall or other objects and cannot be crushed.

- Release the locking brakes.



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



Traversing ramps, recesses and slanted surfaces

✓ Two people

✓ Cooling deactivated, operation indicator LED of on/off switch not illuminated

✓ Power plug pulled and in power plug retainer

⚠ 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 > 10°.

⚠ Caution!

Low clearance from floor on uneven traversal path!
When traversing ramps, recesses or inclined surfaces, the underframe of the unit can contact the surface, thereby damaging the refrigeration unit.

➥ Ensure that the underframe does not contact the floor while it is being moved over ramps, recesses or inclined surfaces.

➥ Carefully push the unit with two people (one at each end).

Keeping food cool

☞ To keep the loss of cool air to a minimum, do not open the doors unnecessarily while cooling is active.

✓ Pre-cool unit at least 30 to 60 min., depending on the ambient temperature.

➥ If the unit was unplugged from the mains after pre-cooling (e.g. after a change of location), plug in the power plug again and switch on the unit with the on/off switch.

➥ Switch on cooling with the on/off switch.

➥ Change the setpoint temperature if necessary.

↳ Subsection "Setting the setpoint temperature" on Page 14.

➥ Keep the food cool as long as desired.

Checking temperature deviations

☞ If the actual temperature deviates from the setpoint by a certain amount (–6 °C, +8 °C), this temperature overshoot/undershoot is registered by the temperature regulator. In case of temperature deviations in effect longer than 60 min., the "Alarm" signal LED illuminates. Either "HA" (temperature overshoot) or "LA" (temperature undershoot) and the actual temperature flash in an alternating fashion in the display.

☞ After cooling is activated, no temperature overshoot or undershoot of the setpoint is detected for 60 min. to prevent an alarm indication from arising during the pre-cooling phase.

Displaying temperature deviations

☞ The "Alarm" signal LED illuminates in case of a temperature deviation. Either "HA" (temperature overshoot) or "LA" (temperature undershoot) and the actual temperature flash in an alternating fashion.

☞ If the actual temperature reaches the preset temperature range of the setpoint during an alarm indication, the actual temperature is displayed again. The "Alarm" signal LED continues to illuminate and must be reset.

✓ The "Alarm" signal LED illuminates

➨ Press the "Up arrow" button briefly.

- or -

Press the "Down arrow" button briefly.
"HAL" appears briefly in the display for a temperature overshoot, and "LAL" for a temperature undershoot.

The display of the highest/lowest temperature during the temperature deviation then appears for approx. 2 sec., followed by "tiM" and the duration of the temperature deviation (in h:min).

The actual temperature display then appears again.

Resetting a saved alarm

☞ The alarm can only be reset if the temperature overshoot/undershoot is no longer in effect. Interrupting the power supply is not an option for resetting the alarm indication. Alarm indications are saved and must be reset manually.

✓ The actual temperature is within the preset temperature range (–6 °C, +8 °C) around the setpoint

✓ The "Alarm" signal LED illuminates

➨ Press the "Up arrow" button briefly.

- or -

Press the "Down arrow" button briefly.
"HAL" appears briefly in the display for a temperature overshoot, and "LAL" for a temperature undershoot.

The display of the highest/lowest temperature during the temperature deviation then appears for approx. 2 sec., followed by "tiM" and the duration of the temperature deviation (in h:min).

SET

➨ Press and hold the "SET" button during this indication (HAL or LAL, value of highest/lowest temperature deviation) until "rSt" briefly flashes and the actual temperature reappears.

The "Alarm" signal LED goes out. The alarm is reset. The actual temperature appears in the display.

Distributing food

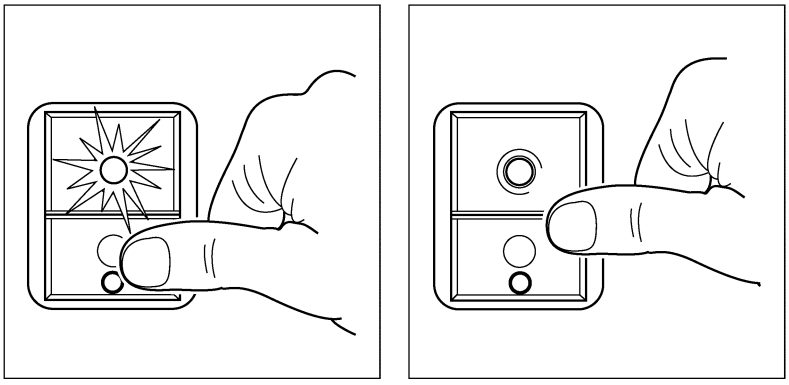
- Open the unit door fully. For two-compartment units, press the right or left unit door to the short side of the tray transport cart. For three-compartment units, press the center unit door to the long side.
  ↳ Subsection "Opening a unit door" on Page 16.
- Remove trays.

☞ The unit must be cleaned thoroughly after use.
↳ Chapter "Cleaning and care" on Page 29.

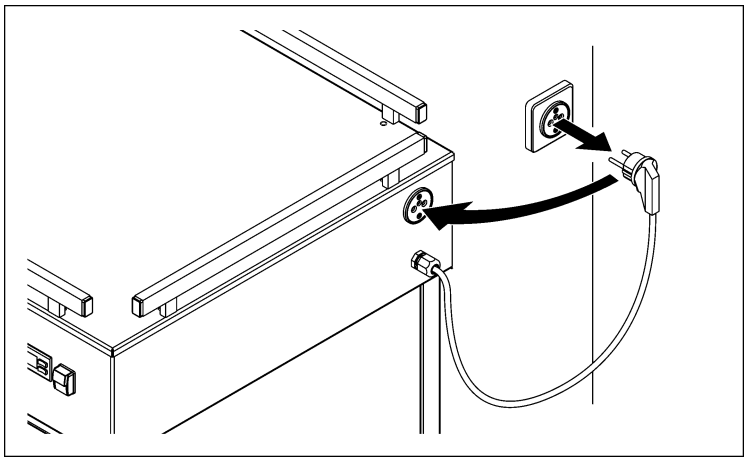
Shutting down

Shutting the unit down

- Switch off cooling with the on/off switch.
  The operation indicator LED of the on/off switch goes out.



- Unplug the power plug and insert it into the power plug retainer.



Help in the event of problems

Operation indicator LED on, on-/off switch does not illuminate

Cause	Action
Power plug is not plugged in.	➡ Plug the power plug into the electrical outlet.
Power plug is damaged; a wire is broken, for example (can also occur without external damage).	➡ Have power plug replaced by a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.
Customer-accessible fuse (household fuse) is defective.	➡ Check the customer-accessible fuse and replace it if necessary.
The unit electronic system is defective.	➡ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.

Operation indicator LED on, on-/off switch illuminates, but unit is not cooling (sufficiently)

Cause	Action
The setpoint temperature is set too high.	➡ Set a lower setpoint temperature. ↳ Subsection "Setting the setpoint temperature" on Page 14.
Ventilation slits blocked.	➡ Remove objects in front of the ventilation of the refrigeration unit.
High ambient temperature.	➡ Move the unit to a cooler location.
Evaporator in unit covered with ice.	➡ Defrost evaporator in unit. ↳ Subsection "Defrosting the unit manually" on Page 15.
Seal on unit door defective.	➡ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.
Temperature regulator is in an irregular condition.	➡ Switch off cooling briefly. ↳ Subsection "Switching cooling on and off" on Page 13. ➡ If this does not solve the problem and the causes we have already mentioned can be ruled out, notify an authorized repairs facility. ↳ Chapter "Repairs" on Page 33.

Cause	Action
"P1" displayed on the temperature regulator of the refrigeration unit (the thermostat sensor is defective).	➨ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.
Refrigeration unit has failed.	➨ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.
The unit electronic system is defective.	➨ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.

"Da" flashes in the display of the temperature regulator

Cause	Action
Door(s) open during cooling.	➨ Close door(s).
Door magnet is loose or missing. Door position is not correct.	➨ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.
The unit electronic system is defective.	➨ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.

Alarm indication of temperature regulator (display: "HA") – temperature overshoot

Cause	Action
High ambient temperature.	➥ Check temperature deviation and reset saved alarm. ↳ Subsection "Checking temperature deviations" on Page 22. ↳ Subsection "Resetting a saved alarm" on Page 22. ➥ Move the unit to a cooler location. - or - Have a refrigeration technician change the refrigeration parameters of the temperature regulator.
The evaporator is covered with ice.	➥ Check temperature deviation and reset saved alarm. ↳ Subsection "Checking temperature deviations" on Page 22. ↳ Subsection "Resetting a saved alarm" on Page 22. ➥ Defrost the unit. ↳ Subsection "Defrosting the unit manually" on Page 15.
Refrigeration unit failed or damaged.	➥ Check temperature deviation and reset saved alarm. ↳ Subsection "Checking temperature deviations" on Page 22. ↳ Subsection "Resetting a saved alarm" on Page 22. ➥ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.

Alarm indication of temperature regulator (display: "LA") – temperature undershoot

Cause	Action
Refrigeration unit does not switch off when setpoint temperature is reached.	➥ Check temperature deviation and reset saved alarm. ↳ Subsection "Checking temperature deviations" on Page 22. ↳ Subsection "Resetting a saved alarm" on Page 22. ➥ Switch cooling off and on again with the on/off switch. ➥ If the malfunction remains, notify a facility authorizedto carry out repairs. ↳ Chapter "Repairs" on Page 33.

"PoF" appears in the display of the temperature regulator when a button is pressed

Cause	Action
Keyboard locked.	➥ Unlock the keyboard. ↳ Subsection "Locking and unlocking the keyboard" on Page 15.

Corrosion of stainless-steel parts

Cause	Action
Incorrect handling/care.	➥ Remove the areas of corrosion. ↳ Subsection "Removing areas of corrosion on stainless steel" on Page 30. ➥ Ensure proper handling/care.

The unit has external damage

Cause	Action
Damage during transport, change of location or other external influences	➥ Shut the unit down. ↳ Chapter "Shutting down" on Page 24. ➥ Secure the unit from being started up accidentally. ➥ Notify a facility authorized to carry out repairs. ↳ Chapter "Repairs" on Page 33.

Cleaning and care

Stainless steel

Surfaces made of stainless steel must be kept clean, dry and open to the air at all times. When the unit is not in operation, keep unit doors open to allow air circulation within.

Regularly remove lime, fat, starch and protein coatings by cleaning. Corrosion due to lack of air contact can occur under these coatings.

Do not allow concentrated acids, spices, salts etc. to come into extended periods of contact with parts made of stainless steel. Contact with these substances can cause corrosion. Acid fumes produced during tile cleaning can also lead to corrosion.

Do not damage the surface of stainless steel, especially with other metals. Residues of other metals may form chemical compounds which can cause corrosion.

Avoid contact with iron and steel at all times. Extreme corrosion can result when stainless steel comes into contact with iron (e.g. steel wool, wire scraps, iron-fortified water).

Cleaning frequency

The unit must be thoroughly cleaned after each use.

Cleaning methods

The prescribed cleaning method for routine daily cleaning is to wipe the unit over with a damp cloth.

Stubborn soiling may be removed with a brush (plastic or natural bristles).

Any additional cleaning methods must be approved by BLANCO.

☞ Do not use a steam jet device or high-pressure cleaner.

Cleaning agents

Cleaning agents for light soiling:

- Commercial cleaning agent/water solution
- Soft cleaning cloth
- BLANCO microfiber cleaning cloth (use with water only)

Cleaning agents for heavy soiling:

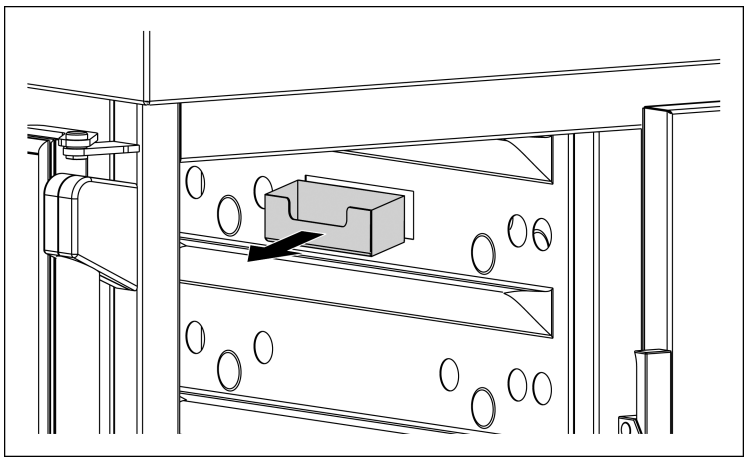
- Commercially available stainless steel cleaning agent, e.g. BLANCOPOLISH

☞ Plastic parts (e.g. corner guards) may not be cleaned with stainless steel cleaning agents, as the surface could be scratched.

Empty the condensation-water catch tray daily and clean it every two weeks

☞ The condensation-water catch tray is located at the top right inside the left unit compartment (two-compartment model) or in the central unit compartment (three-compartment model).

➥ Pull the condensation-water catch tray from the guide.



➥ Empty condensation-water catch tray.

➥ If necessary, clean the condensation-water catch tray using the cleaning methods described above.

↳ Subsection "Cleaning methods" on Page 29.
↳ Subsection "Cleaning agents" on Page 29.

➥ Push the condensation-water catch tray into the guide.

Cleaning the unit

➥ Unplug power plug from the electrical socket and insert it into the power plug retainer.

➥ Clean the unit with the cleaning methods and cleaning agents described above.

➥ After cleaning with a stainless steel cleaning agent, rinse with water and rub dry.

Removing areas of corrosion on stainless steel

New areas of corrosion

➥ Unplug power plug from the electrical socket and insert it into the power plug retainer.

➥ Remove areas of corrosion with a scouring agent or fine sandpaper.

Older and more severe areas of corrosion

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 (Industrieverband Haus-, Heiz- und Küchentechnik e. V. (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.

⚠ 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 power 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 the unit regularly maintained

☞ BLANCO recommends regular maintenance of the unit by appropriately trained professionals. Regular maintenance prevents failure of the unit, extends its operating life and contributes to general value retention.

➡ Have maintenance performed on the unit regularly by appropriately trained professionals.

Maintaining the refrigeration unit

BLANCO recommends having the refrigeration unit serviced once a year by a specialist company.

Checking locking brakes

☞ The locking brakes must be checked for effectiveness every time the unit is moved to a new location.

➡ Lock the locking brakes.

➡ Try to move the unit while the brakes are locked (do not use excessive force!).

➡ If the effectiveness of the brakes is not sufficient, have the defective castor replaced immediately by one of the following:

- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service

Checking unit door seal

☞ The seal on the unit doors must be checked regularly for damage.

➡ Check door seal for damage (visual inspection).

➡ If damage is present, contact one of the following:

- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service

Check door magnet for proper seating

☞ If the door magnet is not properly attached, reliable cooling is not guaranteed.

➡ Ensure that the door magnet is attached properly.

Commission a 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 0702 series of standards.

Checking the connection cable and power plug

➡ At least once every six months check the cable and power plug for mechanical damage and signs of excessive aging in accordance with BGV A 2 or the corresponding national regulations.

Changing the refrigeration parameters

ℹ The refrigeration parameters of the temperature regulator (such as switching hysteresis) can be modified or reset as required by a refrigeration engineer. Information on setting the temperature regulator will be found in the separate operating instructions for the temperature regulator. The operating instruction are found in the machine compartment for cooling and are accessable via the revision panel.

↳ Operating instructions for temperature regulator.

➡ If necessary, have the refrigeration parameters changed by a refrigeration engineer.

Repairs

Authorized persons

☞ Repairs (including replacement of the power cable) may only be carried out by the following service points:

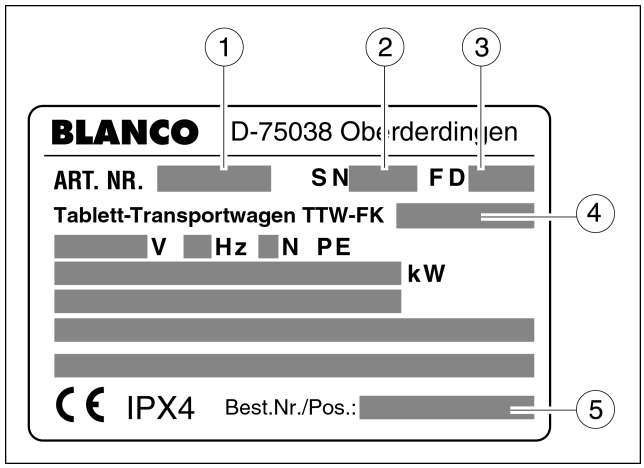
- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service
- For repairs to the refrigeration system: Specialist refrigeration engineers

Description of problem

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

- Article number
- Serial number
- Date of manufacture
- Model
- Order number

The rating plate is located near the power line to the unit.



(1) Article number
(2) Serial number
(3) Date of manufacture
(4) Model
(5) Order number

Replacing components

☞ Defective components may only be replaced through the following service points:

- In-house, BLANCO-trained professionals
- External, BLANCO-trained customer service
- BLANCO Service
- For repairs to the refrigeration system: Specialist refrigeration engineers

Spare parts

The following information is required when ordering spare parts:

- Designation of spare part
- Article number
- Date of manufacture of the unit
- Quantity

↳ Refer to the service CD-ROM and service documentation (available from BLANCO Service).

Address

BLANCO CS GmbH + Co KG
Catering Systems
P. O. Box 13 10
75033 Oberderdingen
GERMANY
Phone +49 7045 44 - 81416
Fax +49 7045 44 - 81508
E-mail cs.service@blanco.de
Internet www.blanco.de

Disposal

Disposing of the unit

- ➨ Have the coolant disposed of by a specialist refrigeration company in accordance with the applicable statutory regulations.
- ➨ Make the unit unusable before disposing of it.
- ➨ Turn the unit over to a recycling center or electrical refuse collection site.

☞ More detailed information regarding disposal and the addresses of disposal facilities will be available from the respective public office (e.g. city or community administration).

Technical data

General data

Dimensions and weights (standard variant)

Model	Length in mm	Width in mm	Height in mm	Empty weight in kg	Max. load weight in kg
TTW-FK 16-105 DSZE	1017	722	1523	174	72
TTW-FK 16-115 DSZE	1018	722	1603	168	72
TTW-FK 20-105 DSZE	1017	722	1733	186	90
TTW-FK 20-115 DSZE	1017	722	1833	181	90
TTW-FK 24-105 DSDE	1438	722	1553	221	108
TTW-FK 24-115 DSDE	1438	722	1633	215	108
TTW-FK 30-105 DSDE	1438	722	1763	238	135
TTW-FK 30-115 DSDE	1438	722	1633	230	135

Number of unit compartments and capacity

Model	Number of unit compartments	Capacity EN = Euronorm
TTW-FK 16-105/115 DSZE	2	16 EN trays
TTW-FK 20-105/115 DSZE	2	20 EN trays
TTW-FK 24-105/115 DSDE	3	24 EN trays
TTW-FK 30-105/115 DSDE	3	30 EN trays

Distance between support ledges

105 mm or 115 mm (depending on model)

Distance between indentations for support ledges (tip safety)

7 mm

Carrying capacity

Component	Permitted area load in kg
Unit top	25

Electrical data

Electrical connection

For all models:

Voltage:	220 to 240 V, 50 to 60 Hz
Output:	0.4 kW (two-compartment model) 0.5 kW (three-compartment model)

Protection type

IP X4 (the unit is protected against splashed water in accordance with DIN EN 60529.)

Environment

Environmental conditions – operation

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

Environmental conditions – storage, transportation

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

Material

Unit body:	stainless steel, polyethylene
Insulation of unit doors:	polystyrene

Refrigeration system

Coolant:	R 134a
Cooling range:	+4 to +12 °C
Defrosting:	automatic, and manual where necessary
Sealing:	refrigeration system checked for proper sealing at factory

Unit model with two compartments

Cooling output:	0.61 kW at t_0 = –10 °C (evaporation temperature) t_a = +32 °C (ambient temperature)

Unit model with three compartments

Cooling output:	0.73 kW at t_0 = –10 °C (evaporation temperature) t_a = +32 °C (ambient temperature)

Ordering information

TTW-FK 16-105 DSZE	Article number:	572 657, 572 673, 572 689, 366 456
TTW-FK 16-115 DSZE	Article number:	572 656, 572 672, 572 688, 366 456
TTW-FK 20-105 DSZE	Article number:	572 659, 572 675, 572 691, 366 457
TTW-FK 20-115 DSZE	Article number:	572 658, 572 674, 572 690, 366 457
TTW-FK 24-105 DSDE	Article number:	572 661, 572 677, 572 693, 366 458
TTW-FK 24-115 DSDE	Article number:	572 660, 572 676, 572 692, 366 458
TTW-FK 30-105 DSDE	Article number:	572 663, 572 679, 572 695, 366 459
TTW-FK 30-115 DSDE	Article number:	572 662, 572 678, 572 694, 366 459
Operating instructions	Document number:	154 308

Accessories

Euronorm trays	Article numbers:	↳ BLANCO price list
Dishes	Article numbers:	↳ BLANCO price list
Cloches	Article numbers:	↳ BLANCO price list
Menu cards	Article numbers:	↳ BLANCO price list
BLANCO microfiber cleaning cloth	Article number:	126 999
Stainless steel cleaning and care agent BLANCOPOLISH	Article number:	511 895
Service CD	Article number:	↳ BLANCO price list

Standards, guidelines, inspection seal

DIN 18865-9: Large kitchen devices, production systems, cabinet interiors in standard and hygienic models.

DIN 18867-7: Equipment for commercial kitchens - Mobile equipment - Food transportation/distribution carts

EN 60335-1: Safety of household and similar electrical appliances; Part 1: General requirements.

EN 60335-2-24: Safety of household and similar electrical appliances; Part 2-24: Special requirements for refrigeration/freezing units, ice cream and ice makers.

DIN EN 60529: Protection types provided by enclosures (IP code).

DIN 66075-3: Food service appliances; insertable trays

BGR 111 (ZH1/37): Rules on safety and health protection for working in kitchens.

BGV A 2 (VBG 4): Accident prevention regulations for electrical units and devices.

DIN EN ISO 9001: BLANCO is certified in accordance with DIN EN ISO 9001.

HKI quality mark: Collective mark of the German industry association for home, heating and kitchen technology (Industrieverband Haus-, Heiz- und Küchentechnik e. V.). This mark documents the particularly high standard of the unit with regard to quality, service and ecology.

BLANCO CS GmbH + Co KG
Catering Systems
P.O. Box 13 10
75033 Oberderdingen
GERMANY
Phone + 49 7045 44 - 81416
Fax + 49 7045 44 - 81508
E-mail cs.service@blanco.de
Internet www.blanco.de

BLANCO

Document no. 154 308 – GB – version 1.0 – 4/01