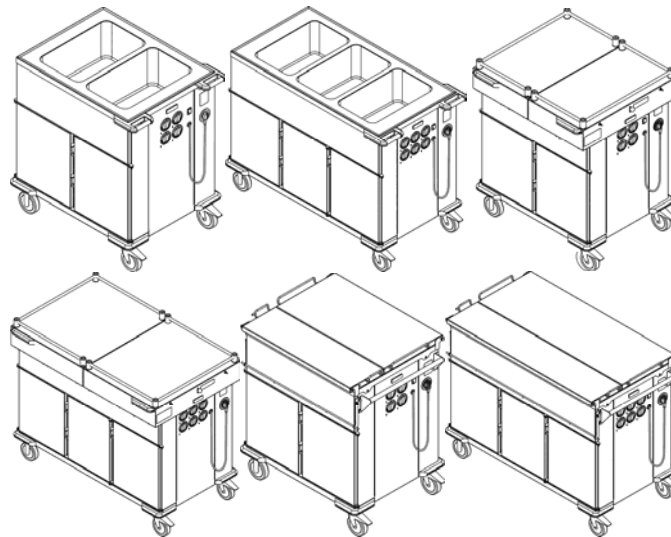


## Operating Instructions



### Food transport trolley

SPTW-2/EBF | SPTW-3/EBF | SPTW-2/EBF-S | SPTW-3/EBF-S |  
SPTW-2/EBF-K | SPTW-3/EBF-K

# 1 Introduction

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## 1.1 Appliance Information

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Appliance designation

Food transport trolley



Appliance type/s

SPTW-2/EBF | SPTW-3/EBF | SPTW-2/EBF-S | SPTW-3/EBF-S | SPTW-2/EBF-K | SPTW-3/EBF-K

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Read these operating instructions thoroughly and attentively to ensure safe operation and avoid any damage!

Ensure that sources of danger and possible faulty operations have been pointed out to the operating staff.

### **Subject to modifications**

The products covered by these operating instructions have been developed taking into consideration the requirements of the market and the latest technology. HUPFER® reserves the right to modify the products and appertaining technical documentation insofar as the modifications are in the name of technological progress. The data and weights as well as the description of performance and functions assured in the order confirmation as binding are always decisive.

**This manual is a translation of the original edition.**

**Manual edition**

4330025\_A1

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## 1.3 List of Abbreviations

Abbreviation	Definition																																				
BGR	Rule of the Professional Association																																				
BGV	Regulation of the Professional Association																																				
CE	Communauté Européenne European Community																																				
BGR	Rule of the Professional Association																																				
DIN	Deutsches Institut für Normung German Institute for Standardisation, technical regulations and technical specifications																																				
EC	European Community European Union																																				
EN	European Standard Harmonised standard for the EU market																																				
E/V	Spare and wearing part																																				
IP	<p>International Protection. The abbreviation IP and a further two-digit index specify the protection class of a housing.</p> <p>The first digit: Protection against ingress of solid foreign objects      The second digit: Protection against ingress of water</p> <table><tr><td>0</td><td>No protection against contact, no protection against ingress of solid foreign objects</td><td>0</td><td>No protection against ingress of water</td></tr><tr><td>1</td><td>Protection against contact with any large surface of the body such as the hand, protection against ingress of foreign objects <math>\varnothing &gt; 1.97''</math> (50 mm)</td><td>1</td><td>Protection against vertically falling water drops</td></tr><tr><td>2</td><td>Protection against contact with fingers, protection against ingress of foreign objects <math>\varnothing &gt; 0.5''</math> (12 mm)</td><td>2</td><td>Protection against dripping water (at any angle up to 15° from the vertical)</td></tr><tr><td>3</td><td>Protection against contact with tools, thick wires or similar objects of <math>\varnothing &gt; 0.1''</math> (2.5 mm), protection against foreign objects <math>\varnothing &gt; 0.1''</math> (2.5 mm)</td><td>3</td><td>Protection against water drips at any angle up to 60° from the vertical</td></tr><tr><td>4</td><td>Protection against contact with tools, thick wires or similar objects of <math>\varnothing &gt; 0.04''</math> (1 mm), protection against foreign objects <math>\varnothing &gt; 0.04''</math> (1 mm)</td><td>4</td><td>Protection against water splashing from any direction</td></tr><tr><td>5</td><td>Protection against contact, protection against dust deposits inside</td><td>5</td><td>Protection against water jets (projected by a nozzle) at any angle</td></tr><tr><td>6</td><td>Complete protection against contact, protection against ingress of dust</td><td>6</td><td>Protection against rough sea or strong water jets (flood protection)</td></tr><tr><td></td><td></td><td>7</td><td>Protection against ingress of water during temporary immersion</td></tr><tr><td></td><td></td><td>8</td><td>Protection against pressurised water during continuous immersion</td></tr></table>	0	No protection against contact, no protection against ingress of solid foreign objects	0	No protection against ingress of water	1	Protection against contact with any large surface of the body such as the hand, protection against ingress of foreign objects $\varnothing > 1.97''$ (50 mm)	1	Protection against vertically falling water drops	2	Protection against contact with fingers, protection against ingress of foreign objects $\varnothing > 0.5''$ (12 mm)	2	Protection against dripping water (at any angle up to 15° from the vertical)	3	Protection against contact with tools, thick wires or similar objects of $\varnothing > 0.1''$ (2.5 mm), protection against foreign objects $\varnothing > 0.1''$ (2.5 mm)	3	Protection against water drips at any angle up to 60° from the vertical	4	Protection against contact with tools, thick wires or similar objects of $\varnothing > 0.04''$ (1 mm), protection against foreign objects $\varnothing > 0.04''$ (1 mm)	4	Protection against water splashing from any direction	5	Protection against contact, protection against dust deposits inside	5	Protection against water jets (projected by a nozzle) at any angle	6	Complete protection against contact, protection against ingress of dust	6	Protection against rough sea or strong water jets (flood protection)			7	Protection against ingress of water during temporary immersion			8	Protection against pressurised water during continuous immersion
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LED	Light Emitting Diode Light diode																																				

## 1.4 Definitions of Terms

Term	Definition
Authorised specialist	An authorised specialist is a specialist that has been trained by the manufacturer, an authorised service dealer or a company assigned by the manufacturer.
Cook&Chill Kitchens	"Cook and Chill": Kitchens where warm food after being cooked is chilled as quickly as possible.
Cook&Serve Kitchens	"Cook and Serve": Kitchens where warm food is served immediately after being cooked or kept warm until it is consumed.
Specialist	A specialist is a person who can evaluate work assigned and can individually recognise any possible dangers due to professional training, specialist knowledge and experience as well as knowledge of the respective guidelines.
Gastronorm	Gastronorm is a measurement system applied worldwide, for instance, in food processing plants or large-scale kitchens. The use of standardised sizes makes it possible to exchange food pans. The basic size of the Gastronorm (GN) 1/1 is 20.9x12.8" (530x325 mm). Items are available in different depths.
H1	Hygienic standard (NSF/USDA) for lubricants that are suitable for incidental and technically unavoidable contact with foodstuffs
Control	Compare with certain conditions and/or characteristics such as damage, leaks, filling levels, heat.
Machine safety	The term of machine safety means all the measures used to avert injury to persons. The basis for this are national as well as EC-wide valid directives and laws for protecting users of technical devices and systems.
Passive layer	A non-metallic protective layer on a metallic material that prevents or slows down material corrosion.
Check	Compare with certain values such as weight, torque, content, temperature.
Qualified person, qualified staff	Qualified personnel are persons who due to their professional training, experience and instruction as well as their knowledge of the respective standards, guidelines, accident prevention regulations and operating conditions have been authorised by a person responsible for system safety to carry out required activities and can recognise and prevent any possible danger (definition of specialists according to IEC 364).
Schuko®	The abbreviation of the German term "Protective contact" that indicates a system of domestic plugs and sockets equipped with protective earthed contacts used in most of Europe.
Instructed persons	An instructed person is a person who has been instructed on the possible risks resulting from improper behaviour when carrying out the assigned task as well as on the necessary protective equipment and protective measures and trained for this task if necessary.

## 1.5 Orientation Guide

### The front

"The front" means the side where the operating elements are arranged. The operating staff stays at this side to move the food transport trolley.

### The rear

The side named "the rear" means the opposite side of the front side (the front).

### The right

The side named "the right" means the side at the right hand side of the front side (the front).

### The left

The side named "the left" means the side at the left hand side of the front side (the front).




## 1.6 Notes on Use of Manual

### 1.6.1 Notes on the Manual Structure

This manual is structured in functional and task orientated chapters.

### 1.6.2 Notes and their Illustrations used in the Chapters

The warnings and notes are separated from the other text and particularly marked by corresponding icons. The icon cannot, however, replace the text of the safety instructions. Therefore, always read thoroughly the full text of the safety instructions. The warnings and notes are separated in these operating instructions as follows and categorised by the following danger levels by means of various symbols.

<b>DANGER</b>	<b>Brief description of danger</b>
	<p>There is an imminent danger to life and limb of the user and / or third parties when the instructions are not followed precisely or the circumstances described are not taken into account.</p> <p>The type of danger is indicated by a symbol and explained in the accompanying text in more detail. In this example the general sign of danger is used.</p>
<b>WARNING</b>	<b>Brief description of danger</b>
	<p>There is an indirect danger to life and limb of the user and / or third parties when the instructions are not followed precisely or the circumstances described are not taken into account.</p> <p>The type of danger is indicated by a symbol and explained in the accompanying text in more detail. In this example the general sign of danger is used.</p>
<b>ATTENTION</b>	<b>Brief description of danger</b>
	<p>There is a potential risk of injury or damage to property when the instructions are not followed precisely or the circumstances described are not taken into account.</p> <p>The type of danger is indicated by a general sign and explained in the accompanying text in more detail. In this example the general sign of danger is used.</p>
<b>NOTE</b>	<b>Brief description of additional information</b>
	<p>Attention is pointed to special conditions or additional important information on the respective subject.</p>
<b>INFO</b>	<b>Short title</b>
	<p>Contains additional information on work assisting features or recommendations on the respective subject.</p>

## 2 Safety Instructions

### 2.1 Introduction

The chapter on safety instructions describes the risks associated with the appliance in terms of product liability (according to the EU Directives).

The safety instructions should warn of hazards and help to avoid damages to persons, the environment and property. Please make sure that you have read and understood all the safety instructions given in this chapter.







You must comply with the respectively valid national and international Safety at Work Regulations. The manager is responsible for the valid regulations he/she has to provide. He/she must acquaint himself/herself and the operator with the new regulations.

In addition to these operating instructions, comply with the rules on health and safety at work issued by the Main Association of the industrial Professional Associations, especially with those that concern the handling of hot items and risks involved (BGR 110 "Protection of health and safety at work in restaurants" and BGR 111 "Protection of health and safety at work in large-scale kitchens").

### 2.2 Warning Symbols Used

Symbols are used in these operating instructions to point out the dangers that can occur while operating or cleaning the appliance. In both cases, the symbol provides information on the type and circumstances of danger.

The following symbols can be used:

	General hazardous area
	Hazardous electrical voltage
	Risk of hand injuries
	Risk of crushing
	Risk of hot surfaces
	Wear hand protection



## 2.3 Safety Instructions for Appliance Safety

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Safe operation of the appliance depends on appropriate and thorough use. Negligent handling of the appliance can lead to danger to life and limb of the user and / or third parties as well as hazards to the appliance itself and the other operator's property.

The following points are to be observed to ensure the appliance safety:

- The appliance may only be operated as intended, when it is in perfect condition with regards to technical standards, with awareness of safety and hazards and in accordance with the operating instructions.
- All the operating and actuating elements must be in a perfect and functionally reliable condition with regards to technical standards.
- The appliance must be checked for external visible damage and defects whenever it is put into operation. In case of damages, inform immediately the competent bodies and switch off the food transport trolley.
- Modifications or retrofits of the equipment are only permitted in consultation with the manufacturer and on receipt of his written agreement.
- The appliances can only be operated under continuous supervision.
- Move the appliance only with the doors closed. Unless the doors are closed, they can open during transport and cause in damages or lead to injuries.
- The appliance is provided exclusively for manual transport. Transport using any kind of devices is not permitted. Risk of injury and damage.
- Release both total brakes before commencing transporting. Moving the appliance with the total brakes locked can damage the chassis.
- Transport should only be undertaken over level floors. Moving the appliance over very uneven floors and stair steps can damage the chassis.
- Do not stop the food transport trolley by applying the total brakes. The total brakes are designed to be able to prevent the appliance from unintended moving. Do not stop the appliance on sloping floors. Secure the appliance against rolling away by applying both total brakes when stopping it.
- When approaching walls and moving round obstacles always pay attention to persons in the way. Risk of injury.
- When transporting the appliance, always hold both push bars with your hands. Never let go of the appliance while moving it.
- When transporting the appliance, do not move it faster than a walking pace. Heavily laden appliances are difficult to brake and steer. If necessary, ask for assistance when transporting the appliance.
- If the food transport trolley tips over due to outside influence or inattention, never catch it manually. Risk of injury.
- In the case of off-site transport in a vehicle such as a lorry, the appliances should be secured properly. The total brakes are not sufficient as a transport securing method.
- Before transporting, switch off the appliance, pull out the mains plug and insert it into the holder provided.
- Never pull the mains plug out of the socket by the connecting lead.
- Never move the appliance by pulling by the connecting lead.
- If the mains plug has come into contact with water it must be dried before inserting it into the socket. Danger to life.
- Damaged mains plugs or the connecting lead are to be replaced by authorised specialists before the appliance is used.
- Do not use any extension leads in wet and damp areas.

### 2.3.1 Safety Instructions for appliances with sliding lid

- Only objects with a firm base may be transported on the shelves so that they can not lead to injuries when falling down. These are for example crockery, cutlery and napkins in suitable transport containers or trays.
- For a better adhesion transported objects have to be protected against falling down on the lid with a non-slip pad.
- The maximum load of the cover segment is 40 kg. The permitted total weight may not be exceeded. Avoid point loads, otherwise this can result in deformations in the metal sheet surface.
- It is not allowed to move open containers with hot liquids on it.
- The appliance may only be moved with closed sliding lid.
- Cover the inserted gastronorm containers with lids. If you use smaller gastronorm containers use separating webs and insert empty gastronorm containers into positions that remain free. The escaping steam can heat the lids up to 100°C.

### 2.3.2 Safety Instructions for appliances with a hinged lid

- It is not permitted to transport any loads on hinged lids, because transported objects are not protected against falling down.
- It is not allowed to move open containers with hot liquids on it.
- The appliance may only be moved with closed hinged lid.
- There is a risk of crushing your fingers when opening and locking the cover segments.
- Cover the inserted gastronorm containers with lids. If you use smaller gastronorm containers use separating webs and insert empty gastronorm containers into positions that remain free. The escaping steam can heat the lids up to 100°C.

## 2.4 Safety Instructions for Transport

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The following points are to be observed when transporting the food transport trolley:

- When loading, use only hoists and load lifting devices approved for the weight of the appliance to be lifted.
- Only use transport vehicles that are approved for the weight of the food transport trolley.
- In no case put a defective appliance into operation and inform the supplier immediately.

## 2.5 Safety Instructions for Cleaning and Care

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The following points must be observed when carrying out any cleaning and maintenance operations:

- Take the food transport trolley out of operation, switch it off, pull out the mains plug and secure it against unauthorised reactivation before performing cleaning and care measures.
- For reasons of hygiene the cleaning instructions must be strictly observed.
- Heated appliances must be out of operation and sufficiently cooled before cleaning.
- Do not clean the appliance with steam-jet or high-pressure washers. The appliance must be taken out of operation and switched off at the mains beforehand in any area where steam-jet or high-pressure washers are to be used.

## 2.6 Safety Instructions for Troubleshooting

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The following points must be observed when carrying out any troubleshooting operations:

- The local applicable Accident Prevention Regulations must be observed.
- Take the food transport trolley out of operation, switch it off, pull out the mains plug and secure it against unauthorised reactivation before performing maintenance or troubleshooting operations. When working on the electrical installation, the appliance must be switched off at the mains and secured against reactivation. This work must only be carried out by a certified electrician.
- Observe the valid product safety regulations when handling oils, greases and other chemical substances.
- Carry out all the checks and inspections of the appliance on a regular basis. Remedy immediately deficiencies, such as loose screw connections, melted or damaged leads.
- Only authorised specialists may perform all repair work.
- Defective components should only be replaced with original parts.

## 2.7 Notes on Specific Hazards

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### Electrical energy

- All work on the electrical installations should only be carried out by a certified electrician or by authorised specialists under supervision and monitoring of a certified electrician according to the applicable electro-technical regulations.
- The appliances on which inspection, maintenance and troubleshooting work is performed must be disconnected from the power supply and secured against reactivation when the voltage is not required for this kind of work. This must only be carried out by a certified electrician.

## 3 Description and Technical Data

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### 3.1 Performance Description

---

The food transport trolleys hold up prepared meals and keep them warm. Food in gastronorm containers can be either put into bain-marie wells or gastronorm containers, on grids or into baskets in heated cupboards. When switched off and with the use of a cold storage plate, the cupboard compartments can also be used for cold meals and cold side dishes, e.g. salads, bread, cold cuts and desserts. Bain-marie wells and heated cupboards are thermally insulated from each other.

Mobile food transport trolleys are mainly used to store, transport for short distances and distribute hot meals.

Food transport trolleys can be used everywhere, where the use of tray systems is not efficient and the free choice of a portion size is a particularly important decision criterion.

The number of persons depends on the number of menu components.

Food transport trolleys are available in different equipment variations. All models are equipped with bain-marie wells and heated cupboards.

- The food transport trolley SPTW-2/EBF-S and SPTW-3/EBF-S are closed with a two-part sliding lid above the bain-marie wells.
- The food transport trolley SPTW-2/EBF-K and SPTW-3/EBF-K are equipped with a hinged lid that can be opened 1/3 to 2/3 to the left and to the right.

### 3.2 Intended Use

---

Food transport trolleys are intended for storing hot meals and for keeping meals warm. It is not possible to heat up cold meals or to cook products which have been introduced in the warm state.

Food transport trolleys are only intended for the transport of meals in gastronorm containers or portioned meals on grids or in baskets.

It is not permitted to heat dry the bain-marie wells of the appliances with foil heating.

Furthermore, objects with a firm base may be transported on appliances with a closed sliding (SPTW-2/EBF-S and SPTW-3/EBF-S) that are protected with a non-slip pad against falling. These are for example crockery, cutlery and napkins in suitable transport containers or on trays.

Do not exceed the maximum load limits per cover segment. Avoid point loads, otherwise this can result in deformations in the metal sheet surface.

The food transport trolleys are only intended for the transport for short distances. When transporting for longer distances, connect the appliance to a power supply, switch the heating on and reheat the meals at regular intervals.

When cooling meals or the components it is necessary to comply with the respective legal directives on food storage (duration and temperature).

The intended use means the predetermined procedures, compliance with the indicated specifications and use of the delivered or additionally available original accessories.

Any other use of the appliance is considered as unintended use.

### 3.3 Improper Use

It is not permitted to load the food transport trolley with other loads as given.

It is not permitted to use food transport trolleys for cooking food or keeping it warm, for room heating and drying the crockery.

The maximum duration of transport of hot meals shall in no case be exceeded between two heating stages.

It is not permitted to transport any loads on the appliances with a hinged lid, because transported objects are not protected against falling down.

Transport of persons is not permitted.

In no case may people sit or stand on the appliance.

Open containers with hot liquids on it may not be moved.

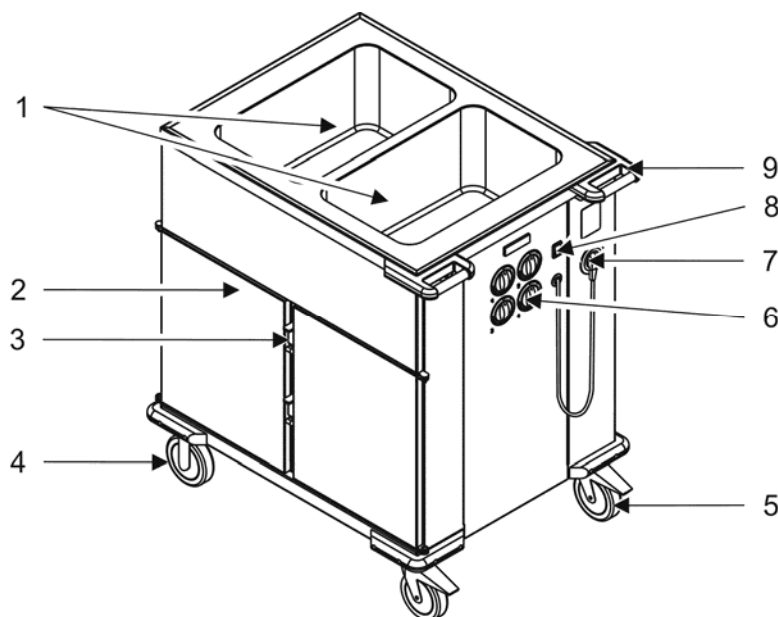
It is not permitted to heat dry the bain-marie wells.

Any other use, especially loading the food transport trolley with other loads as given, is not permitted.

The manufacturer and suppliers are not liable for any consequential damage resulting from unintended use. No liability is assumed and no warranty claims can be submitted for damages caused by improper use.

### 3.4 Appliance Description

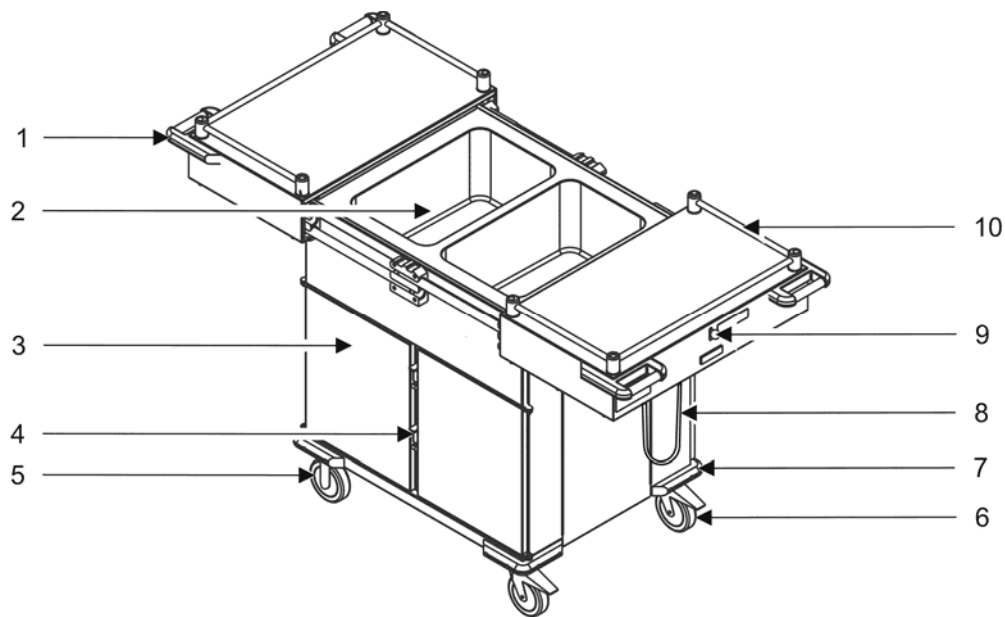
#### 3.4.1 Description of food transport trolley



**Figure 1** View of the appliance SPTW-2/EBF

- |   |                                |   |   |
|---|--------------------------------|---|---|
| 1 | Bain-marie well                | 6 | Thermostat for setting the temperature* |
| 2 | Heated cupboard door           | 7 | Connecting lead with mains plug         |
| 3 | Door lock                      | 8 | On / Off switch                         |
| 4 | Fixed caster                   | 9 | Push bars                               |
| 5 | Swivel caster with total brake |   |   |

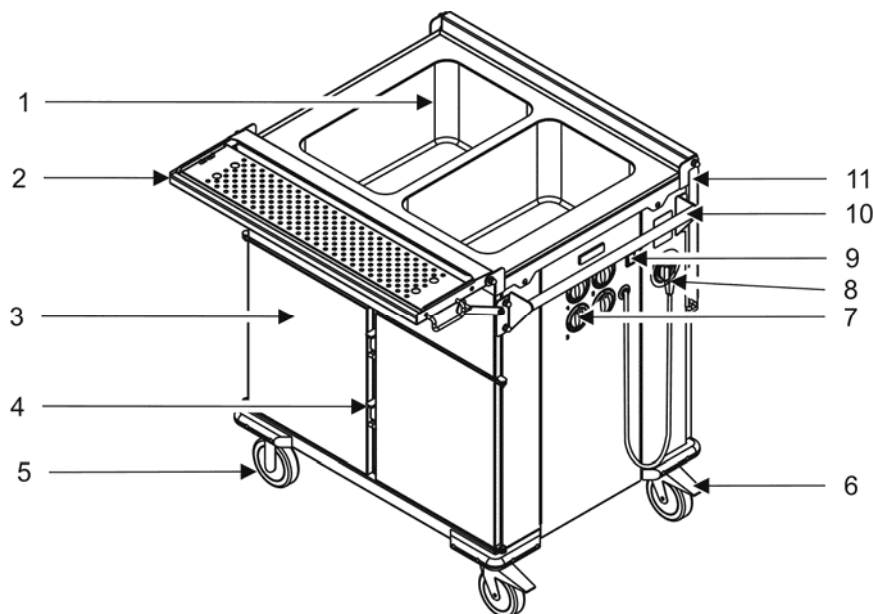
### 3.4.2 View of the appliance food transport trolleys with sliding lid



**Figure 2** View of the appliance SPTW-2/EBF-S

- |                        |                                   |
|------------------------|-----------------------------------|
| 1 Push bars            | 6 Swivel caster with total brake  |
| 2 Bain-marie wells     | 7 Corner bumper                   |
| 3 Heated cupboard door | 8 Connecting lead with mains plug |
| 4 Door lock            | 9 Lever for cover release         |
| 5 Fixed caster         | 10 Peripheral gallery             |

### 3.4.3 View of the appliance food transport trolleys with hinged lid



**Figure 3** View of the appliance SPTW-2/EBF-K

- |   |   |
|---|---|
| 1 Bain-marie well                         | 7 Thermostat for setting the temperature* |
| 2 1/3 Cover element with perforated plate | 8 Connecting lead with mains plug         |
| 3 Heated cupboard door                    | 9 On / Off switch                         |
| 4 Door lock                               | 10 Push bar                               |
| 5 Fixed caste                             | 11 2/3 Cover element, open                |
| 6 Swivel caster with total brake          |   |

### 3.4.4 Appliance Description

Food transport trolleys are equipped with heated bain-marie wells and heated cupboard compartments. They hold up prepared meals in Gastronorm containers and keep them warm. There is also the opportunity to use heated cupboard compartments in combination with a cold storage plate as a cooling compartment. Due to the thermal insulation of the mobile bain-marie, the bain-marie wells that are placed above and the adjacent heated cupboards are not affected.

The bain-marie wells are filled with water up to the fill level indicator and warmed up by a foil heater. The generating water vapour heats up the inserted Gastronorm containers. The heating element and electrical parts are easy to be accessed and can be dismantled without any problems. The bain-marie wells can be emptied by the water drain taps after the operation.

The operating temperature for each bain-marie well and each heated cupboard compartment can be chosen separately. The thermostats are fitted on the front side of the food transport trolley that is used to set the operating temperature continuously between 30°C and 95°C for each bain-marie well, and continuously between 30°C and 80°C for each cupboard compartment. Thereby the digits on the thermostats help to allocate to the corresponding bain-marie wells and heated cupboard compartments.

The cover elements of both models with a sliding lid (SPTW-2/EBF-S and SPTW-2/EBF-S) can be opened back and forth. When closing the covering elements are mechanically locked in the end position. The lever for cover release can be operated with one hand. To loosen the locking you have to push down the lever.

The cover elements of the models with a hinged lid (SPTW-2/EBF-K and SPTW-2/EBF-K) can be opened to the right and left. The smaller 1/3 element with a removable perforated plate is opened to the left and can be locked with two supports in a 180° position. It can be used for serving plates, filling of soup bowls and to hold up ladles. The bigger 2/3 element is opened to the right and it is equipped with a condensate collecting channel on the inner side. When it is opened to an angle of 270° it can be used to hold gastronorm container lids. It is not possible to lock it in an angle of 180°.

### 3.4.5 Equipment and optional accessories




The following parts can be applied as optional accessories for the food transport trolley:

- **Folding shelf**  
Folding shelves made of stainless steel are designed to hold up crockery items. They can be fitted either on the lateral side or on the front side of the models. Only authorised staff may fix the folding shelves to the appliance. To do this, they need a welding device. It is not permitted to put heavy loads on to folding shelves. During transport, they must be folded up. The folding shelves can be folded up by lifting them slightly up and raising them to an angle of 90°. There is a risk of crushing your fingers when folding up and locking.
- **Cold storage plate**  
The cold storage plates are filled with approximately 4 litres of cooling brine. Nutritionally, plastic housings and coolant are totally harmless. Dimensions 530 x 325 x 30 mm, total weight 4.5 kg. During the phase transition from the solid to the liquid state about 70 % of the available cooling power is released. If only liquid cooling brine is used, the power will be only 30 % of the maximal possible value.  
When freezing, cold storage plates have to be stored horizontally and with sufficient distance to each other, since otherwise centrally located cold storage plates cannot be cooled sufficiently even after 24 hours. During the freezing process, the cold storage plates bulge due to the volume increase of the cooling brine. This is a natural process that can be reversed by the heating in the food transport trolley.  
It is not useful to cool down the cooling brine below -18°C because too low temperatures slow down the liquid-to-solid phase transition. The maximal permitted surface temperature of the cold storage plates is +50°C. Cold storage plates are not suitable for the cleaning in dishwashers.
- **Sneeze guard**  
The sneeze guard serves as a hygienic protection when serving food. In addition, the integrated heat bridge warms the meals from above and prevents the formation of condensation on the transparent sneeze guard.
- **Gastronorm containers and bowls of various sizes**
- **Support bars for wells, length 325 mm, made of stainless steel**
- **Support bars for wells, length 530 mm, made of stainless steel**
- **Basket GN 1/1, 530 x 325 x 70 mm, Mesh width 26 mm, stainless steel, plastic-coated**

- Anti-slide mat, Multigrip, plastic, black
- Swivel casters made of stainless steel, Ø = 125, 160 or 200 mm with and without total brakes, plate attachment
- Fixed caster made of stainless steel, Ø = 125, 160 or 200 mm, plate attachment

The part numbers of the special accessories can be found in the spare parts catalogue and order lists available online.

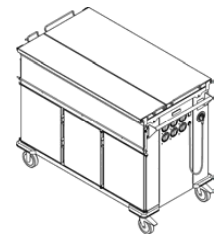
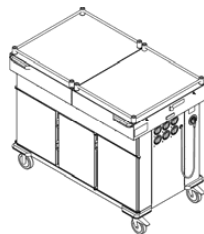
### 3.5 Technical Data

	Dim.	SPTW-2/EBF	SPTW-3/EBF	SPTW-2/EBF-S
				
Width	in (mm)	27.5 (700)	27.5 (700)	31.2 (795)
Depth	in (mm)	36.5 (922)	51.8 (1317)	39.3/68.7 (1000/1745)
Height	in (mm)	38.3 (974)	38.3 (974)	41.7 (1061)
Own weight	lbs (kg)	169.7 (77)	233.6 (106)	224.8 (102)
Payload	lbs (kg)	227 (103)	339.5 (154)	370.3 (168)
Capacity (in people)		25	50	25
maximum duration of transport between two heating stages	min	20	20	20
Number of bain-marie wells		2	3	2
Size of bain-marie wells	in (mm)	20.9 x 12.8 (530 x 325)	20.9 x 12.8 (530 x 325)	20.9 x 12.8 (530 x 325)
Heating of bain-marie wells		Foil heating	Foil heating	Foil heating
Temperature regulation, for each well separately		continuous	continuous	continuous
Thermostat setting	°C (°F)	30-95 (86-203)	30-95 (86-203)	30-95 (86-203)
Heat insulation		ceramic mat	ceramic mat	ceramic mat
Number of cupboard compartments		2	3	2
Cupboard inner dimensions	in (mm)	12.8 x 22.04 x 17.2 (327 x 560 x 438)	12.8 x 22.04 x 17.2 (327 x 560 x 438)	12.8 x 22.04 x 17.2 (327 x 560 x 438)
Beads		5 pairs, distance 75 mm	5 pairs, distance 75 mm	5 pairs, distance 75 mm
Heating of heated cupboards		Stainless steel tubular heating element 0.45 kW	Stainless steel tubular heating element 0.45 kW	Stainless steel tubular heating element 0.45 kW



	Dim.	SPTW-2/EBF	SPTW-3/EBF	SPTW-2/EBF-S
Temperature regulation, for each compartment separately		continuous	continuous	continuous
Thermostat setting	°C (°F)	30-80 (86-176)	30-80 (86-176)	30-80 (86-176)
Heat insulation		special insulation	special insulation	special insulation
Power requirement	kW	2.3	3.45	2.3
Protection class		IPX5	IPX5	IPX5
Operating and environmental conditions of casters	°C (°F)	-20 to +50 (-4 to 122)	-20 to +50 (-4 to 122)	-20 to +50 (-4 to 122)
Caster diameter	mm	125	125	125

	Dim.	SPTW-3/EBF-S	SPTW-2/EBF-K	SPTW-3/EBF-K
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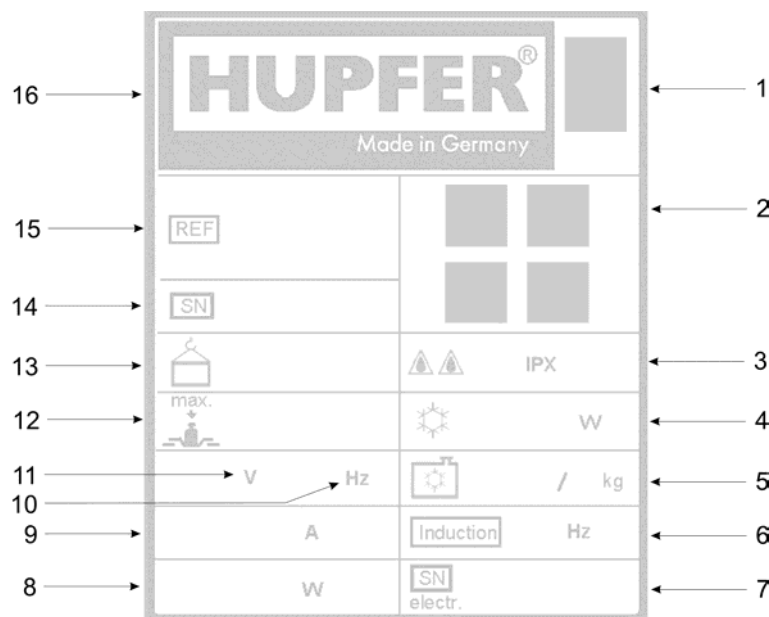


Width	in (mm)	31.2 (795)	27.5/36.85 (700/936)	27.5/36.8 (700/936)
Depth	in (mm)	54.8/99.7 (1393/2533)	36.6 (931)	52.1 (1325)
Height	in (mm)	41.7 (1061)	40.8 (1037)	40.8 (1037)
Own weight	lbs (kg)	306.4 (139)	198.4 (90)	275.5 (125)
Payload	lbs (kg)	266.7 (121)	242.5 (110)	341.7 (155)
Capacity (in people)		50	25	50
maximum duration of transport between two heating stages	min	20	20	20
Number of bain-marie wells		3	2	3
Size of bain-marie wells	in (mm)	20.9 x 12.8 (530 x 325)	20.9 x 12.8 (530 x 325)	20.9 x 12.8 (530 x 325)
Heating of bain-marie wells		Foil heating	Foil heating	Foil heating
Temperature regulation, for each well separately		continuous	continuous	continuous
Thermostat setting	°C (°F)	30-95 (86-203)	30-95 (86-203)	30-95 (86-203)
Heat insulation		ceramic mat	ceramic mat	ceramic mat
Number of cupboard compartments		3	2	3
Cupboard inner dimensions	in (mm)	12.87 x 22 x 17.24 (327 x 560 x 438)	12.87 x 22 x 17.24 (327 x 560 x 438)	12.87 x 22 x 17.24 (327 x 560 x 438)

	Dim.	SPTW-3/EBF-S	SPTW-2/EBF-K	SPTW-3/EBF-K
Beads		5 pairs, distance 75 mm	5 pairs, distance 75 mm	5 pairs, distance 75 mm
Heating of heated cup-boards		Stainless steel tubular heating element 0.45 kW	Stainless steel tubular heating element 0.45 kW	Stainless steel tubular heating element 0.45 kW
Temperature regulation, for each compartment separately		continuous	continuous	continuous
Thermostat setting	°C (°F)	30-80 (86-176)	30-80 (86-176)	30-80 (86-176)
Heat insulation		special insulation	special insulation	special insulation
Power requirement	kW	3.45	2.3	3.45
Protection class		IPX5	IPX5	IPX5
Operating and environ- mental conditions of casters	°C (°F)	-20 to +50 (-4 to 122)	-20 to +50 (-4 to 122)	-20 to +50 (-4 to 122)
Caster diameter	in (mm)	125	125	125

The corresponding test marks can be found on our home page at [www.hupfer.de](http://www.hupfer.de).

### 3.6 Rating Plate



**Figure 4** Rating plate

- |   |                            |    |                            |
|---|----------------------------|----|----------------------------|
| 1 | Disposal of old appliances | 9  | Nominal current            |
| 2 | Test mark                  | 10 | Frequency                  |
| 3 | Protection class           | 11 | Nominal voltage            |
| 4 | Chilling capacity          | 12 | Payload                    |
| 5 | Refrigerant                | 13 | Own weight                 |
| 6 | Induction frequency        | 14 | Serial number/Order number |
| 7 | Current serial number      | 15 | Item and brief description |
| 8 | Electric power             | 16 | Manufacturer               |

## 4 Transport, Putting into Operation and Decommissioning

### 4.1 Transport

#### ATTENTION



#### Appliance damages caused by improper transport

In the case of off-site transport in a vehicle such as a lorry, the appliances should be secured properly. The total brakes are not sufficient as a transport securing method.

If the appliances are not secured properly, there is a risk of damage to property and persons caused by squashing.

During transport, secure all the individually standing appliances using corresponding transport securing devices.

The food transport trolley is delivered as an assembled unit, i.e. it is completely assembled including the heating.

When loading, use only hoists and load lifting devices approved for the weight of the food transport trolley. Only the transport vehicles may be used that are approved for the weight of the appliance.

According to the valid purchase contract, the scope of delivery is specified in the shipping documents attached to the delivery item.

### 4.2 Putting into Operation

#### DANGER



#### Hazardous electrical voltage

The electrical voltage may be considerably dangerous to limb and life of persons and lead to injuries.

Before putting the appliance into operation check, whether the power supply indicated on the rating plate (230V / 50 Hz) corresponds to the local power supply. Otherwise, do not put the appliance into operation.

Do not use any extension leads in wet areas.

Remove the original packing and check, whether the appliance is complete and undamaged. In no case put a defective appliance into operation and inform the supplier immediately.

Always place the food transport trolley on firm and level floors when unpacking and operating it. Apply the total brakes on both swivel casters to secure the appliance against rolling away.

#### INFO

#### Disposal of packing material

The packing consists of recyclable materials and can be disposed of appropriately. Thereby, the different materials are to be separated and disposed in an environmentally compatible manner. In any case, the local bodies responsible for disposal are to be involved for this purpose

The food transport trolley should be thoroughly cleaned with a soft cloth before putting it into operation for the first time. Before the appliance is put into operation it must be clean and dry.

The following appliance functions must be checked before putting it into operation:

- the functioning of the total brakes
- the functioning of the operating elements and heating.

### 4.3 Storage and Recycling

Temporary storage must take place in a dry and frost-free environment. The food transport trolley must be kept covered with a suitable covering material to be protected against dust ingress.

The appliance kept in the storage location must be checked for damages and corrosion every 6 months.

<b>NOTE</b>	<b>Condensed water formation</b>
Ensure that there is sufficient ventilation and no large temperature fluctuations in the storage location to avoid condensed water formation.	

Before the appliance is taken back into operation it must be clean and dry.

If the food transport trolley is recycled, all operating and auxiliary materials must be disposed in an environmentally compatible manner. The recyclable materials must be properly separated and disposed in an environmentally compatible manner according to the local Waste Disposal Regulations. In any case, the local bodies responsible for disposal are to be involved for this purpose. Separate the reusable materials of the appliance (casters and plastic parts) before disposing or send the appliance to a recycling centre. Dispose the electronics at corresponding collection centres.

We offer our customers to dispose their waste appliances. Please contact us or one of our distribution partners.

Packaging and packing material can be sent to the recycling centre by indicating the waste disposal contract number. If you do not have the valid waste disposal contract number, you can ask for it at [HUPFER®](#) - Service.

## 5 Operation

### WARNING



### Risk of hot surfaces

If the thermostat is set to the level 3 and higher, the permitted maximum temperature of 149°F (65°C) for touchable appliance surfaces can be exceeded. Direct contact with your skin can cause burns.

Only instructed staff may operate the appliance. Wear suitable protective clothing.

### ATTENTION



### Damage to property

A layer of scale acts as thermal insulation and can lead to a heat accumulation above the tubular heating element as well as cause in damage to the well base. There is a risk of corrosion under the scale layer. If you heat the bain-marie wells dry, they get warped and micro-cracks form. This can result in a total damage.

Only operate the food transport trolley when it is clean.

The food transport trolley must be checked for external visible damages and defects before each operation.

Before putting the appliance into operation, the heated cupboards must be clean and the bain-marie wells must be cooled down, clean and without scale deposits. If required, bain-marie wells that have been already put into operation and completely drained off must cool down for some time.

Appliances equipped with foil heating may not be heated without water in the bain-marie well.

### 5.1 Arrangement and Function of the Operating Elements

The operating elements of the food transport trolley are arranged on the front side of the appliance.

The digits on the thermostats can be allocated to the bain-marie wells and the heated cupboards.

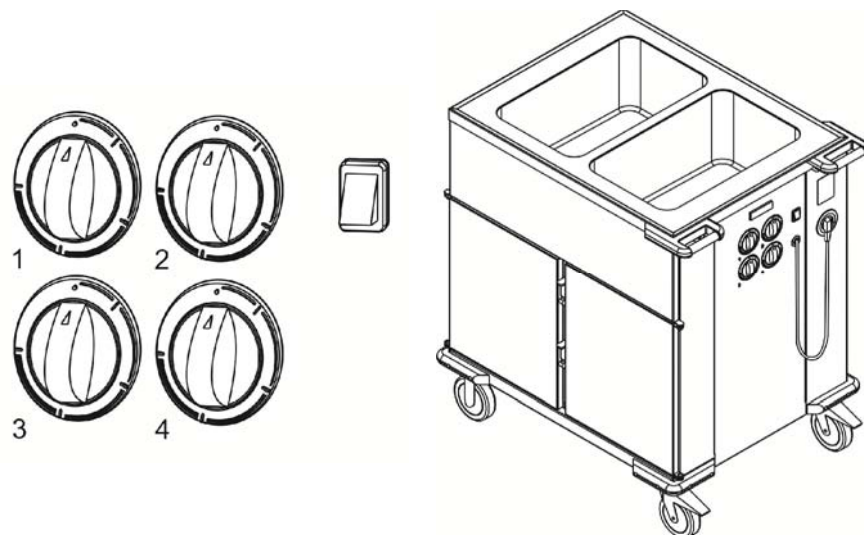


Figure 5 Operating elements of the SPTW-2/EBF

## 5.2 Operation

### WARNING

#### Risk of hot surfaces



If the thermostat is set to the level 3 and higher, the permitted maximum temperature of 149°F (65°C) for touchable appliance surfaces can be exceeded. Direct contact with unprotected skin can cause burns.

Only instructed staff may operate the appliance. Wear suitable protective clothing.

### 5.2.1 Filling bain-marie wells

- Close the water drain taps.
- Fill the bain-marie wells with about 3 l water. There is a maximum fill level indicator on the inner side of the heat-retaining well.

### NOTE

#### Filling bain-marie wells

Filling warm or hot water reduces the heating time of the appliance. The inserted Gastronorm containers should not come into contact with water, for this reduces heat transfer. Steam is the best heat transfer medium. The higher the fill level, the longer heating time is.

### INFO

#### Water quality

If tap water is particularly rich of minerals use softened water to reduce deposits of scale.

### 5.2.2 Tempering

The On/Off switch and the thermostat for the bain-marie wells and heated cupboards are arranged on the front side of the food transport trolley.

If you use a cupboard compartment as a cooling compartment, adjacent heated cupboards and overlying bain-marie wells can be normally operated due to the thermal insulation.

#### Setting the temperature of the bain-marie wells

- Close the bain-marie wells with a well closing lid to avoid heat loss.
- Connect the food transport trolley to the mains.
- Switch on the appliance with the On / Off switch. The indicator integrated in the switch will light up to show that the appliance is ready for operation.
- Set the desired temperature using the thermostat of the certain bain-marie well. A continuous adjustment is possible within the 4 power ranges. Digits engraved into the housing above every thermostat helps to allocate them to the corresponding bain-marie wells.

### NOTE

#### Temperature setting

If the temperature of the heated cupboard is set too low, the food temperature can drop to the value below the permitted limit of 65°C. This affects negatively the food safety and stimulates quick bacterial growth.

### INFO

#### Operating temperature

If the appliance is filled with cold water up to 2 cm, closed well with a lid and switch on to the maximum power, the water in the bain-marie wells will reach a temperature of 90°C in about 45 minutes.

### Setting the temperature of the heated cupboards

- In order to avoid heat loss you have to close the heated cupboards.
- Connect the food transport trolley to the mains.
- Switch on the appliance with the On / Off switch. The indicator integrated in the switch will light up to show that the appliance is ready for operation.
- Set the desired temperature using the thermostat of the heated cupboard. A continuous adjustment is possible within the 4 power ranges. Digits engraved into the housing above every thermostat helps to allocate them to the corresponding bain-marie wells.

INFO	Warm up the heated cupboard
	If you warm up the heated cupboard, you can avoid that warm meals get cold.

### Use the heated cupboard as a cooling compartment

NOTE	Use of the cold storage plate
	<p>It is necessary to use at least one cold storage plate per compartment. The cold storage plate has to be inserted horizontally into the uppermost shelf. Warm meals should not be put into the appliance.</p> <p>The temperature of the liquid-to-solid phase transition is <math>-12^{\circ}\text{C}</math>. A constant cooling temperature of <math>-18^{\circ}\text{C}</math> and a duration of cooling of 24 hours is recommended, since the cold storage plates must be completely frozen in order to be fully effective and to significantly reduce liquid components in the cooling brine. When you shock freeze them, the duration in the appliance will be reduced. Please take into account the technical notes of the respective manufacturers.</p>


The following must be considered when they are used as cooling compartment:

- The heating of the cupboard compartment is switched off.
- The temperature of the cupboard compartment corresponds to the room temperature.
- The cold storage plate is completely frozen and is inserted into the uppermost pair of beads.

The duration of cooling is technically limited and dependent on the ambient temperature and the impact by any heat sources (e.g. sunlight). The state of the cold storage plate has to be checked at regular intervals. New cold storage plates have to be used regularly for longer cooling times.

When stored meals are kept properly, it is necessary to check and verify the compliance of the prescribed storage temperatures with appropriate measuring instruments (thermometers) before the distribution of meals.

#### 5.2.3 Loading

WARNING	Risk of scalding   Risk of hot surfaces
	<p>Metal parts of the appliance can get very hot during operation. Water steam escaping between the Gastronorm containers can cause scalds.</p> <p>Therefore, pay always attention, if the Gastronorm containers are closed well. Wear suitable protective clothing.</p>

Gastronorm containers (1/1) with the depth of up to 200 mm can be put into the bain-marie wells without taking any further measures.


If you use smaller Gastronorm containers (e.g. GN 2/3, GN 1/2 or GN 1/3), you should use support bars to reduce the steam escape between the containers and, subsequently, heat loss.

- Put support bars suitable for smaller Gastronorm containers into the bain-marie wells.
- Put the Gastronorm containers into the bain-marie wells.
- Place a suitable lid to avoid heat loss.

5 pairs of beads at a distance of 75 mm are available for each heated cupboard compartment. For the optimal use of the cupboard compartment you should use gastronorm containers with a depth of 65 mm. Along with gastronorm containers you can also insert grids or baskets with portioned meals into the heated cupboards.

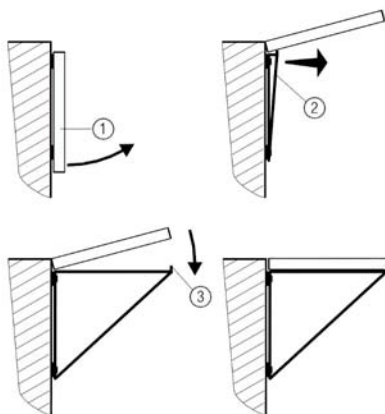
It is also possible to use GN 2/3, GN 1/2 and GN 1/3 containers. It is not possible to insert smaller containers.

#### 5.2.4 Moving

ATTENTION	Injuries and damage to property due to improper transport
	<p>Only move the food transport trolley when the doors and lids are closed. Unless the doors are closed, they can open during transport and cause damages or lead to injuries. Before transport, check the food transport trolley whether the doors and lids are closed.</p>

- Set all thermostats to 0.
- Switch off the appliance with the On / Off switch.
- Pull out the mains plug and insert it into the plug park provided.
- Release the total brakes.
- Grip the food transport trolley by the push bars and move it to the destination.
- When you got to the destination, apply both total brakes and make sure they are locked and the appliance is secured against unintended movement.
- Connect the appliance to the mains.
- Switch on the food transport trolley with the On / Off switch.
- Set the desired capacity using the thermostat of the certain bain-marie well.

#### Using the folding shelf



**Figure 6** Fold down the folding shelf

- Fold up the folding shelf (1).
- Fold down the supports (2).
- Place the supports so that the pins (3) fit into the holes when folding down the folding shelf.

To fold up the folding shelf, proceed in the reverse sequence.



## 5.3 Measures at the End of Operation

### Switching the food transport trolley off

#### WARNING

#### Risk of hot surfaces



Heated Gastronorm containers can be very hot after operation and exceed the maximum temperature of 65°C, at which you are allowed to touch the appliance surfaces with bare hands. Direct contact with unprotected skin can cause burns.

Act carefully. Wear suitable protective clothing.

- Set all thermostats to 0.
- Switch off the appliance with the On / Off switch.
- Apply both total brakes, make sure they are locked and the appliance is secured against unintended movement.
- Pull out the mains plug and insert it into the plug park provided.
- Remove the inserted Gastronorm containers.
- Remove the support bars if available.

### Draining off the water

#### WARNING

#### Risk of scalding



The water in the bain-marie wells can be very hot after operation. There is a risk of scalding, when draining off water.

Act carefully. Wear suitable protective clothing.

#### WARNING

#### Risk of hot surfaces



After draining off water, the water drain taps can get very hot and the maximum temperature of 65°C, at which you are allowed to touch the appliance surfaces with bare hands, can be exceeded. Direct contact with unprotected skin can cause burns.

Act carefully. Wear suitable protective clothing.

#### NOTE

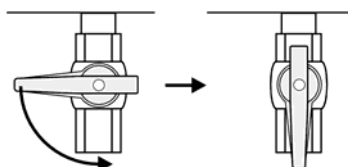
#### Opening the water drain tap

Never turn off or on the water drain taps with a tool. If the water drain tap is stiff, use lubricants that are harmless to health or parting agents (according to USDA-H1).

#### NOTE

#### Draining off the water

Turn on the water drain taps only directly above the on-site drain or a central waste drain in the kitchen.





**Figure 7** Opening the water drain tap

- Open the water drain taps.
- Drain off the water from the bain-marie wells.

## 6 Fault Detection and Troubleshooting

### 6.1 Safety Measures

<b>DANGER</b>	<b>Hazardous electrical voltage</b>
	<p>The electrical voltage may be considerably dangerous to limb and life of persons and lead to injuries.</p> <p>Before looking for faults, switch off the appliance at the mains. Pull out the mains plug and hung it on the plug holder provided.</p>
<b>WARNING</b>	<b>Risk of hot surfaces</b>
	<p>The heated appliances can become hot during operation and only cool down slowly in the air.</p> <p>Before looking for faults, let the appliance cool down sufficiently.</p>

### 6.2 Notes on Troubleshooting

Please contact our service partners in case of malfunction and complaints within the warranty period. Even after the warranty period is expired you can have necessary repair work done by our service partners and certified electricians.

Service work should only be carried out by authorised specialists.

Defective components should only be replaced with **HUPFER®** original parts. The modular design simplifies the replacement of individual components.

In the event of after-sales service and when ordering spare parts, always specify the data and corresponding part number indicated on the rating plate.

Regular inspection and maintenance of the appliance prevent disruptions to operation and ensure safety.




### 6.3 Fault and Action Table

Fault	Possible cause	Action
Running noise of swivel casters	Defective caster bearings	Replace the swivel casters
	Sticky surface of the casters	Clean the swivel casters
The appliance pulls to the right or to the left when transporting	Damaged caster bearings	Replace defective casters with new ones
Rolling resistance of the casters is higher than when putting the appliance into operation		
Total brakes do not have any locking action	Wear of the locking brakes	Replace the locking brakes or replace defective casters with new ones
Appliance does not become warm; indicator light does not come on	Defective building fuses	Check fuse and repair, if necessary
	Defective On / Off switch	Switch off the appliance at the mains, have it checked and repaired by authorised specialist staff, if necessary
	Defective mains connecting lead or mains plug	Switch off the appliance at the mains, have it checked and repaired by authorised specialist staff, if necessary

Fault	Possible cause	Action
Appliance becomes warm; indicator light does not come on	Defective indicator light	Take the appliance out of operation, have it checked and repaired by authorised specialist staff, if necessary
	Defective circuit	Take the appliance out of operation, have it checked and repaired by authorised specialist staff, if necessary
Appliance does not become warm; indicator light is on	Thermostat is defective	Take the appliance out of operation, have it checked and repaired by authorised specialist staff, if necessary
Bain-marie well takes too long to heat up	Too much water in the bain-marie well	Reduce the amount of water
	Deposits of scale or impurities in the bain-marie well	Take the appliance out of operation, descale and clean the bain-marie well after it has been sufficiently cooled down
Heated cupboard takes too long to heat up	Heated cupboard door is not closed properly	Close the heated cupboard door
	Damaged lip seal of the frame	Replace the seal (see the list of spare parts)
Water runs off despite closed valve	Ball valve is defective	Ball valve has to be replaced
Water does not run off despite open ball valve	Drainage pipe is clogged	When the valve is open carefully push down stuck leftovers with suitable tools, e.g. flexible bottle brush or wire.
Segments of the sliding lid are difficult to handle	Lack of lubrication of stainless steel tubes and guides	Relubricate stainless steel tubes and guides
Cooling is not sufficient	Cold storage plates too warm	Insert newly frozen cold storage plates
	Cupboard door is not closed properly	Close cupboard door
	The cold storage plate has become untight due to mechanical impact.	Use new cold storage plates
	Product temperature higher than 10°C	Store only cold foodstuff
	Usage of wrong cold storage plates	At a lower temperature cold storage plates containing liquid brine are not as efficient as the completely frozen ones
	Cold storage plate does not lie on the uppermost beads	Cold storage plate lies on the uppermost beads

## 7 Cleaning and Care

### 7.1 Safety Measures

<b>DANGER</b>	<b>Hazardous electrical voltage</b>
	<p>The electrical voltage may be considerably dangerous to limb and life of persons and lead to injuries.</p> <p>Before cleaning, switch off the appliance at the mains. Pull out the mains plug and hung it on the plug holder provided.</p>
<b>WARNING</b>	<b>Risk of hot surfaces</b>
	<p>The heated appliances can become hot during operation and only cool down slowly in the air.</p> <p>Before cleaning, let the appliance cool down sufficiently.</p>
<b>ATTENTION</b>	<b>Appliance damages</b>
	<p>A layer of scale acts as thermal insulation and can lead to a heat accumulation above the tubular heating element as well as cause in damage to the well base. There is a risk of corrosion under the scale layer.</p> <p>Clean the bain-marie wells thoroughly after every use.</p>

### 7.2 Hygiene Measures

The correct behaviour of the operating staff is decisive for optimal hygiene.

All persons must be informed about the locally valid hygiene regulations, observe them and comply with them.

Stick a waterproof plaster to cover wounds on the hands and arms.

Never sneeze or cough on clean crockery or meals.

### 7.3 Cleaning and Care

If the food transport trolley is handled with care, cleaned and maintained on a regular basis, it does not require any additional care measures. The bain-marie wells and heated cupboards should be cleaned regularly after every use to ensure a hygienically perfect operation.

To clean thoroughly and quickly, wipe the bain-marie wells and heated cupboards with a soft cloth. Use for cleaning a soft cleaning cloth or an uncoated sponge. Use degreasing liquid cleansers that are approved for food industry. Never use high-pressure cleaners, chloride-containing cleaning agents, abrasive cleaning powder or other dry cleaning agents, steel wool, steel sponges and/or sharp-edged items.

If after cleaning the bain-marie wells there are still scale deposits, remove them, otherwise energy consumption will grow and efficiency will decrease. In case of heavy scale deposits, this can result in damages to the appliance. To descale, use commercially available descaling agents or vinegar water.

You can regrease the water drain taps with lubricating grease approved for use in the food industry to maintain tightness and ease of movement.

To clean the food transport trolley, proceed as follows:

- Switch off the appliance. Pull out the mains plug and insert it into the plug park provided.
- Allow the appliance to cool down.
- Drain off the bain-marie wells.
- Wipe the bain-marie wells and descale if required.

- Clean the heated cupboards.
- Wipe the exterior panelling, folding shelves and shelves of the appliance.

**Table of care measures**

Cleaning and care measures	Action	daily	weekly	monthly	Interval
Bain-marie wells	clean				x <sup>1</sup>
Heated cupboards	clean				x <sup>1</sup>
Condensate collecting channel (only SPTW-2EBFS   SPTW-3 EBFS)	clean				x <sup>1</sup>
Bain-marie wells	descale				x <sup>2</sup>
Outer cover of the food transport trolley	clean				x <sup>2</sup>
Folding shelves and shelves of the food transport trolley	clean				x <sup>2</sup>
Swivel casters	lubricate				x <sup>3</sup>
Water drain taps	lubricate				x <sup>2</sup>
Mechanical damages and obsolescence on the connecting lead	check				x <sup>4</sup>
Mechanical damages and obsolescence on the mains plug	check				x <sup>4</sup>

x<sup>1</sup> = after use

x<sup>2</sup> = if necessary, every 25 operating hours at the latest

x<sup>3</sup> = every 2 months

x<sup>4</sup> = every 6 months

## 7.4 Special Care Instructions

The resistance to corrosion of stainless steels is based on a passive layer which is formed on the surface when oxygen is admitted. The oxygen in the air is sufficient for the formation of the passive layer, so that faults or damage to the passive layer can be remedied again automatically by mechanical action.

The passive layer develops or reforms more quickly when the steel comes into contact with flowing water containing oxygen. The passive layer can be chemically damaged or disrupted by agents having a reducing (oxygen-consuming) action when the steel comes into contact with them in concentrated form or at high temperatures.

Such aggressive substances are for example:

- substances containing salt and sulphur
- chlorides (salts)
- seasoning concentrates (e.g. mustard, vinegar essence, seasoning cubes, saline solutions).

Further damages can occur due to:

- extraneous rust (e.g. from other components, tools or rust film)
- iron particles (e.g. grinding dust)
- contact with non-ferrous metals (element formation)
- lack of oxygen (e.g. no admission of air, low-oxygen water).

General working principles for the handling of appliances made of "refined stainless steel":

- Always keep the surface of appliances made from stainless steel clean and accessible to the air.
- Use cleaning agents suitable for stainless steel. No bleaching and chloride-containing cleaning agents should be used.
- Remove layers of lime scale, grease, starch and egg-white daily by cleaning. Corrosion can occur underneath these layers due to lack of air admission.
- After each cleaning operation remove all cleaning agent residues by wiping thoroughly. Afterwards, the surface should be thoroughly dried.
- Do not bring parts made from stainless steel into contact with concentrated acids, seasonings, salts etc. for longer than is absolutely necessary. Acid fumes which generate during cleaning of tiles also promote the corrosion of "refined stainless steel".
- Avoid damaging the surface of the stainless steel, particularly by metals other than stainless steel.
- Residues of extraneous metals produce extremely small amounts of chemical elements which can cause corrosion. In any case, contact with iron and steel should be avoided because that leads to extraneous rust. If stainless steel comes into contact with iron (steel wool, steel particles from pipes, water containing iron), this can be a trigger for corrosion. Therefore, for mechanical cleaning use exclusively refined steel wool or brushes with natural, plastics or refined steel bristles. Steel wool or brushes with unalloyed steel lead to extraneous rust due to abrasion.

## 8 Spare Parts and Accessories

### 8.1 Introduction

Service work should only be carried out by authorised specialists.

Defective components should only be replaced with **HUPFER®** original parts. That is the only way to guarantee a safe operation and long service life together with a high transport capacity.

In the event of after-sales service and when ordering spare parts specify always the data and corresponding part number given in the rating plate.

Always give the order number and corresponding part number when ordering replacement parts. The order number is given on the rating plate of the food transport trolley.

Always stockpile a full set of replacement parts as a reserve or make a maintenance contract with a specialised dealer to avoid standstill times.

### 8.2 Spare Parts and Accessories List

#### Spare parts main unit SPTW

**SPTW-2/ EBF | SPTW-3/ EBF | SPTW-2/ EBF-K | SPTW-3/ EBF-K | SPTW-2/ EBF-S | SPTW-3/ EBF-S**

014000400	Fixed caster	Ø 125 mm plate, bearing, plastic	incl. 4 nuts
014000401	Swivel caster	Ø 125 plate, bearing, plastic	incl. 4 nuts
014000402	Swivel caster	Ø 125 with breaks plate, bearing, plastic	incl. 4 nuts
91082883	Lead	Wend.H07BQ-F 3G1,5/1600 WS-	
014001112	Heating	Stainless steel 230 V 450 W SPTW/EB-2+3	
4001213	Thermostat	30-90°C 1S cl.1730 UL	
014001300	On / Off switch	w. frame, spray h.	
014002170-01	Thermostat	Switching module, complete	
4002973	Silicone profile	Lip seal	
4005008	Ball valve	CuZn nickel-pl. 1/2"	
0163309	Drain hose	SPTW complete	
014034027-01	Thermostat	30-115°C	
91310361	Terminal	Block ZuF 4.0 black 3pole 4leads UL	
91095077	Limiter	Temp. protection 90°C 2Ö	
0191076705	Lock	SPTW complete	
014002110	Corner bumpers	Complete set	(Package contents 4 piece)
0191148605	Dummy socket	ø75/43 sw cpl	
0163655	Cable gland	with tension relief set	
0162636	Heating	Foil 230V 700W	
0162626	Repair set	Foil heating	
0132502H	Gastronorm container	Bridge SB-325 16.5	
0132512H	Gastronorm container	Bridge SB-530 23.5	
0132522H	Gastronorm container	Bridge SB-325 20.5	

#### Spare parts to appliance SPTW-2/ EBF

91134729-01	Cable set	SPTW-2/ EBF foil heating	
0191176895	Push bar	left+right PP 192/180/30 black	incl. fixing material

#### Spare parts to appliance SPTW-3/ EBF

91134739-01	Cable set	SPTW-3/ EBF foil heating	
0191176895	Push bar	left+right PP 192/180/30 black	incl. fixing material

#### Spare parts to appliance SPTW-2/ EBF-K

91134729-01	Cable set	SPTW-2/ EBF foil heating	
91125630	Push bar	632/115/80 kpl	

#### Spare parts to appliance SPTW-3/ EBF-K

91134739-01	Cable set	SPTW-3/ EBF foil heating	
91125630	Push bar	632/115/80 cpl	

#### Spare parts to appliance SPTW-2/ EBF-S

0191176895	Push bar	left+right PP 192/180/30 black	incl. fixing material
91134729-01	Cable set	SPTW-2/ EBF foil heating	
014057025	Ball knob	AWT set	(Package contents 2 piece)
91121713	Locking lever	729/420/25 kpl	
014040363	Compression spring	Stainless steel Ø1.4/Ø16/45 set	(Package contents 10 piece)
91114611	Condensate stripper	PVC 614/45/1.5 white mB	
91121716	Condensate stripper	PVC 395/36/3	left + right

#### SPTW-3/ EBF-S

0191176895	Push bar	left+right PP 192/180/30 black	incl. fixing material
91134739-01	Cable set	SPTW-3/ EBF foil heating	
014057025	Ball knob	AWT set	(Package contents 2 piece)
91114575	Locking lever	729/617/33 kpl	
014040363	Compression spring	Stainless steel Ø1.4/Ø16/45 set	(Package contents 10 piece)
91114611	Condensate stripper	PVC 614/45/1.5 white mB	
91114585	Condensate stripper	PVC 592/36/3 mB6	left + right

The following plug types can be used with food transport trolleys:

- 2-pole Schuko® angle plug (standard)
- CEE plug 230 V - 16 A - 3-pole in Germany on request at SPTW-3/EBF, in Switzerland Standard at SPTW-3 EBF
- 3-pole British mains plug in accordance with BS 1363 A for Great Britain and Hong Kong
- 3-pole Swiss mains plug of type 12 - 10 A