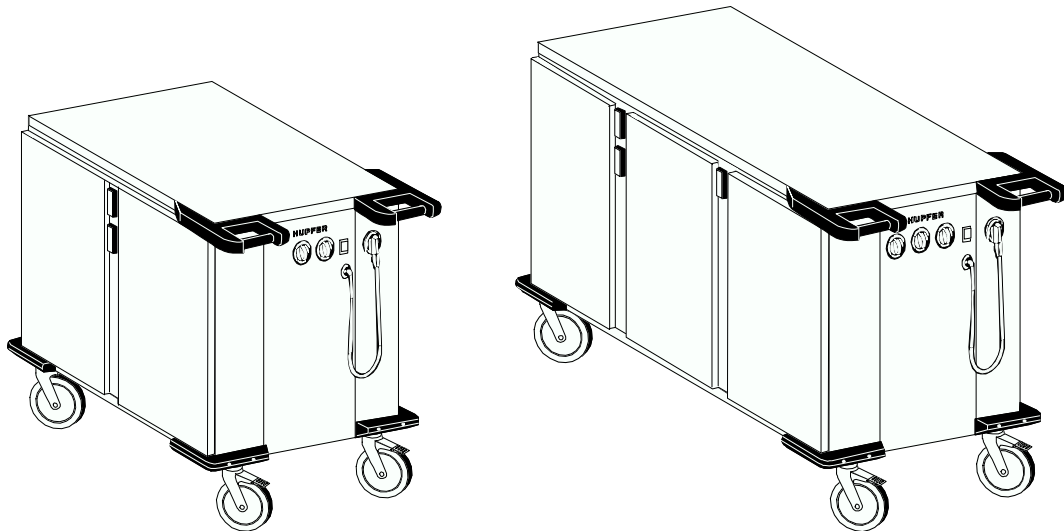




Operating Instructions



Food transport trolley SPTW-2 | SPTW-3

1 Introduction

1.1 Appliance Information

Appliance designation	Food transport trolley
Appliance type/s	SPTW-2 SPTW-3
Manufacturer	HUPFER® Metallwerke GmbH & Co. KG Dieselstraße 20 48653 Coesfeld P.O. Box 1463 D-48634 Coesfeld  +49 2541 805-0  +49 2541 805-111 www.hupfer.de info@hupfer.de

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 in so far 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.

Manual edition
4330038_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																																								
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	<div>International Protection. The abbreviation IP and a further two-digit index specify the protection class of a housing.</div> <table><tr><th colspan="2">The first digit: Protection against ingress of solid foreign objects</th><th colspan="2">The second digit: Protection against ingress of water</th></tr><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 $\varnothing>1.97''$ (50 mm)</td><td>1</td><td>Protection against vertically falling water drops</td></tr><tr><td>2</td><td>Protection against contact with the fingers, protection against ingress of foreign objects $\varnothing>0.5''$ (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 $\varnothing>0.1''$ (2.5 mm), protection against foreign objects $\varnothing>0.1''$ (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 $\varnothing>0.04''$ (1 mm), protection against foreign objects $\varnothing>0.04''$ (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>	The first digit: Protection against ingress of solid foreign objects		The second digit: Protection against ingress of water		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 the 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 12.8x20.9" (325x530mm). 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.

DANGER	Brief description of danger
	<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>
WARNING	Brief description of danger
	<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>
ATTENTION	Brief description of danger
	<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>
NOTE	Brief description of additional information
	<p>Attention is pointed to special conditions or additional important information on the respective subject.</p>
INFO	Short title
	<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 hot surfaces
	Wear hand protection

2.3 Safety Instructions for Appliance Safety

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.
- 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, secure the appliances properly. The total brakes are not sufficient as a transport securing method.
- Before moving the appliance, switch it off, 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 dry it before inserting it into the socket. Danger to life.
- Damaged mains plugs or connecting leads are to be replaced by authorised personnel before the appliance is reused.
- Do not use any extension leads in wet and damp areas.
- When the appliance is moved, there should be no heavy items on the top plate. Only objects with a firm base may be transported on the worktop 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 better adhesion objects transported on the worktop have to be protected against falling down with a non-slip pad. It is not allowed to move open containers with hot liquids on it.
- The maximum load of the worktop is 44 lbs (20 kg). The permitted total weight may not be exceeded. Avoid point loads, otherwise this can result in deformations in the worktop.
- If the loaded appliance is moved for longer distances, connect it to a power supply at regular intervals to reheat the food introduced. The duration between two heating stages depends on the temperature, type of food introduced and the load of the appliance. However, 20 minutes may not be exceeded.
- If cold storage plates are used, do not put the appliance into operation.

2.4 Safety Instructions for Use of Cold Storage Plates

- Wear cold protection gloves when dealing with cold storage plates.
- Always store the cold storage plates in a horizontally lying position.
- The cold storage plates must be frozen while lying in a horizontal position, so that the liquid inside can be distributed evenly.
- Handle the frozen cold storage plates carefully, otherwise there is the risk of breakage. Avoid heavy shocks and bending loads.
- The cold storage plates must be completely frozen in order to be fully effective. The insufficiently frozen coolant reduces considerably the cooling capacity. Cold storage plates are completely frozen with a constant cooling temperature of -0.4°F (-18°C) and a duration of cooling of about 24 hours.

- Check the condition of the inserted cold storage plates at regular intervals. For longer cooling times, new cold storage plates have to be inserted regularly.
- When cooling food it is absolutely essential to keep to the respective statutory regulations on the storage conditions.
- When cold meals are kept properly, check and record the compliance of the prescribed storage temperatures with appropriate measuring instruments (e.g. thermometer) before serving the meals.

2.5 Safety Instructions for Transport

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.

2.6 Safety Instructions for Cleaning and Care

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.

2.7 Safety Instructions for Troubleshooting

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

- The local applicable Accident Prevention Regulations must be observed.
- Switch the food transport trolley 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.

2.8 Notes on Specific Hazards

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

3.1 Performance Description

Food transport trolleys are mainly used to store, transport for short distances and distribute hot meals. Food transport trolleys can also be used for event catering.

The food transport trolleys hold up prepared meals and keep them warm. The meals are inserted in gastronorm containers, on grids or in baskets into the 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.

The heated cupboards are thermally insulated from each other, so that one cupboard compartment can be cooled and the other one heated.

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.

Food transport trolleys may transport objects with a firm base, if they are protected against falling down with a non-slip pad. These are for example crockery, cutlery and napkins in suitable transport containers or on trays.

The maximum load of the worktop may not be exceeded. 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.

If cold storage plates are used, the cupboard compartments are also suitable for keeping products cold which have been introduced in the cold state. In this case, warm meals should not be put into the cooled cupboard compartment.

When cooling food it is absolutely essential to keep to the respective statutory regulations on the storage conditions.

When cold meals are kept properly, check and record the compliance of the prescribed storage temperatures with appropriate measuring instruments (e.g. thermometer) before serving the meals.

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.

Food transport trolleys should not be used for food distribution at the food distribution belt. Containers that have been placed on the worktop cannot be kept warm and cool down too quickly.

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

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.

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

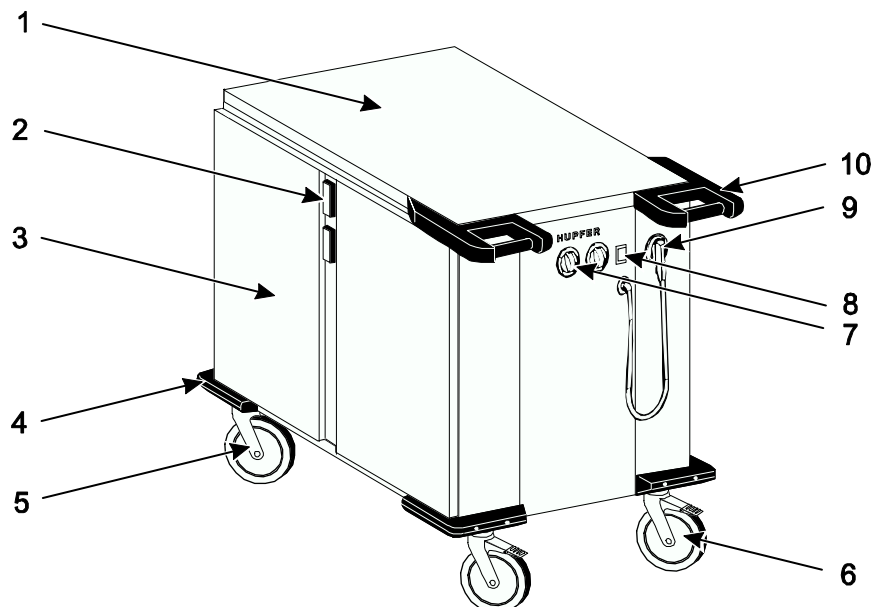


Figure 1 View of the appliance SPTW-2

- | | |
|------------------------|--|
| 1 Worktop | 6 Swivel caster with total brake |
| 2 Door lock | 7 Thermostat for setting the temperature |
| 3 Heated cupboard door | 8 On / Off switch |
| 4 Bumper strip | 9 Connecting lead with mains plug |
| 5 Fixed caster | 10 Push bars |

3.4.2 Appliance Description

Food transport trolleys are completely made of stainless steel and have a strong, self-supporting construction.

They hold up prepared meals in gastronorm containers, on grids or in baskets and keep them warm in heated cupboards. The cupboard doors are double-walled, sound absorbing and thermally insulated. Due to the thermal insulation, adjacent heated cupboards are not affected, so that the heated cupboard compartments are also suitable as cooling compartments if cold storage plate are used. The door lock can be easily unlocked with one hand.

The operating temperature for each heated cupboard compartment can be chosen separately. There are thermostats on the front side of the food transport trolley that are used to set the operating temperature continuously between 86°F and 176°F (30°C and 80°C) for every cupboard compartment. Thereby the digits on the thermostats help to allocate to the corresponding heated cupboard compartments.

Ergonomically formed push bars with integrated bumper protect your hands against injuries. The side walls as well as the operating and display elements are protected against damage by corner bumpers.

The cupboard compartments can be cleaned quickly and easily.



3.4.3 Equipment and optional accessories

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

- 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 20.9 x 12.8 x 1.2" (530 x 325 x 30 mm), total weight 9.9 lbs (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 -0.4°F (-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 +122°F (+50°C). Cold storage plates are not suitable for the cleaning in dishwashers.
- Gastronorm containers and bowls of various sizes
- Anti-slide mat, Multigrip, plastic, black
- Swivel casters made of stainless steel, Ø = 4.9, 6.3 or 7.9" (125, 160 or 200 mm) with and without total brakes, plate attachment
- Fixed caster made of stainless steel, Ø = 4.9, 6.3 or 7.9" (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	SPTW-3
			
Width	in (mm)	26.5 (673)	26.5 (673)
Depth	in (mm)	36.5 (926)	52.1 (1300)
Height	in (mm)	35.4 (900)	35.4 (900)
Worktop	in (mm)	23.2 x 32.5 (590 x 826)	23.2 x 47.2 (590 x 1200)
Own weight	lbs (kg)	178.6 (81)	239.2 (108.5)
Payload	lbs (kg)	264.6 (120)	352.7 (160)
Permitted total weight	lbs (kg)	449.7 (204)	591.9 (268.5)
Capacity (for people)		25	50
maximum duration of transport between two heating stages	min	20	20

	Dim.	SPTW-2	SPTW-3
Number of cupboard compartments		2	3
Internal dimensions of heated cupboard	in (mm)	13 x 21.2 x 24 (330 x 540 x 609)	13 x 21.2 x 24 (330 x 540 x 609)
Beads		7 pairs, distance 3" (75 mm)	7 pairs, distance 3" (75 mm)
Electrical connection		230 V 1N AC 50/60 Hz	230 V 1N AC 50/60 Hz
Heating of heated cupboards		Stainless steel tubular heating element 0.45 kW	Stainless steel tubular heating element 0.45 kW
Temperature regulation, for each compartment separately		continuous	continuous
Thermostat setting	°F (°C)	86-176 (30-80)	86-176 (30-80)
Heat insulation		special insulation	special insulation
Power requirement	kW	0.9	1.35
Protection class		IPX4	IPX4
Chassis		2 swivel casters with total brakes 2 fixed casters	2 swivel casters with total brakes 2 fixed casters
Caster diameter	in (mm)	6.3 (160)	6.3 (160)

The corresponding test marks can be found on our home page at www.hupfer.de.

3.6 Rating Plate

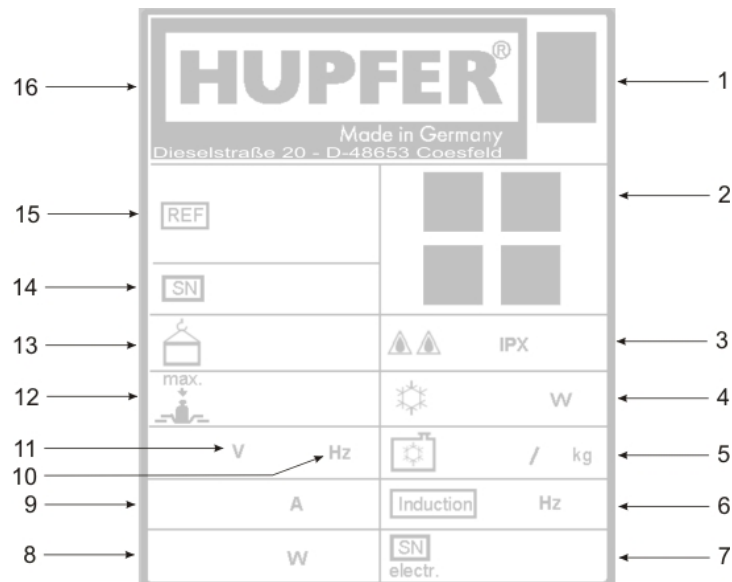


Figure 2 Rating plate

- | | | | |
|---|----------------------------|----|----------------------------|
| 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 | Coolant | 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 / 50/60 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 heatings.

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.

NOTE	Condensed water formation
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.

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 of the appliance must be clean.

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 heated cupboards.

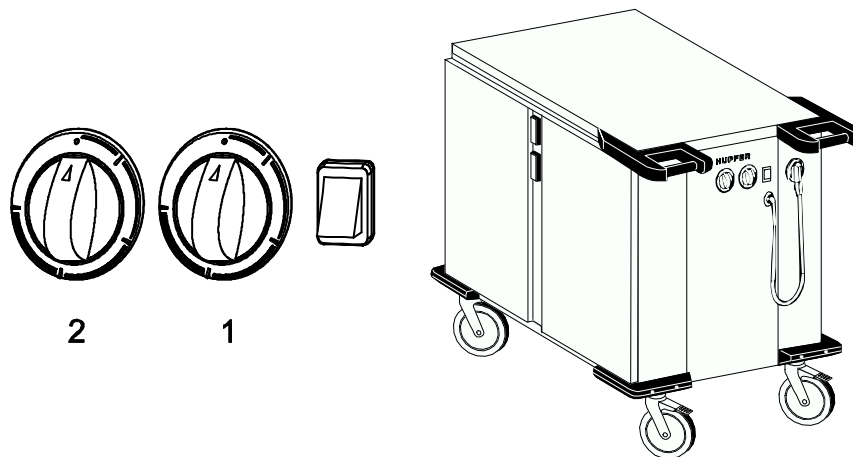


Figure 3 Operating elements of the SPTW-2

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 Tempering

The On/Off switch and the thermostats for the heated cupboards are arranged on the front side of the food transport trolley.

If a cupboard compartment is used as a cooling compartment, adjacent heated cupboards can be normally operated due to the thermal insulation.

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 149°F (65°C). This affects negatively the food safety and stimulates quick bacterial growth.

- 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 four power ranges. Digits engraved into the housing help to allocate the thermostats to the corresponding heated cupboard compartments.

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 10.4°F (-12°C). A constant cooling temperature of -0.4°F (-18°C) 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 cold meals are kept properly, it is necessary to check and record the compliance of the prescribed storage temperatures with appropriate measuring instruments (e.g. thermometer) before serving the meals.


5.2.2 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>

7 pairs of beads at a distance of 3" (75 mm) are available for each heated cupboard compartment. For the optimal use of the cupboard compartment use gastronorm containers with a depth of 2.6" (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.

5.2.3 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 in 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.
- Reconnect the appliance to the mains and switch it on with the On/Off switch.
- If necessary, set the desired temperature using the thermostat.



5.3 Measures at the End of Operation

Switching the food transport trolley off

- 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 support bars if available.
- Unload and clean the appliance.

6 Fault Detection and Troubleshooting

6.1 Safety Measures

DANGER	Hazardous electrical voltage
	<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. Switch off the appliance with the On / Off switch, pull out the mains plug and insert it into the plug holder provided.</p>
WARNING	Risk of hot surfaces
	<p>The heated appliances can become hot during operation and only cool down slowly in the air.</p> <p>Before looking for faults, open the door of the appliance and let it 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
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)
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 50°F (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

DANGER	Hazardous electrical voltage
	<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. Switch off the appliance with the On / Off switch, pull out the mains plug and insert it into the plug holder provided.</p>
WARNING	Risk of hot surfaces
	<p>The heated appliances can become hot during operation and only cool down slowly in the air.</p> <p>Before cleaning, open the door of the appliance and let it cool down sufficiently. Wear suitable protective gloves.</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 heated cupboards should be cleaned regularly after every use to ensure a hygienically perfect operation.

To clean thoroughly and quickly, wipe the 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.

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.
- Clean the heated cupboards.
- Set all thermostats to 0.
- Switch off the appliance with the On / Off switch.

Table of care measures

Cleaning and care measures	Action	daily	weekly	monthly	half-yearly
Heated cupboards	clean	x			
Exterior panelling of the Food transport trolley	clean	x			
Swivel casters	lubricate				x
Mechanical damages and obsolescence on the connecting lead	check				x
Mechanical damages and obsolescence on the mains plug	check				x

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

SPTW-2

Spare part, part number	Item designation	Type	Qty
4058050	Heating cartridge	for base	1
014058041	Heating element	230V / 450 W Ø 6,5	1
014000152	Fixed caster	Ø 160, galvanised	1
014000151	Swivel caster	with total brake, Ø 160, galvanised	1
4058240	Door	right	1
4058241	Door	left	1
014002110	Corner bumper	Plastic, packaging unit 4 pieces	1
0191010963	Push bar	Plastic	1
014001213	Thermostat	30-90°C	1
0191082883	Curly lead	black	1
014001300	On / Off switch	250 V	1

SPTW-3

Spare part, part number	Item designation	Type	Qty
4058050	Heating cartridge	for base	1
014058041	Heating element	230V / 450 W Ø 6,5	1
014000152	Fixed caster	Ø 160, galvanised	1
014000151	Swivel caster	with total brake, Ø 160, galvanised	1
4058240	Door	right / left	1
4058244	Door	middle	1
014002110	Corner bumper	Plastic, packaging unit 4 pieces	1
0191010963	Push bar	Plastic	1
014001213	Thermostat	30-90°C	1
0191082883	Curly lead	black	1
014001300	On / Off switch	250 V	1

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
- 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