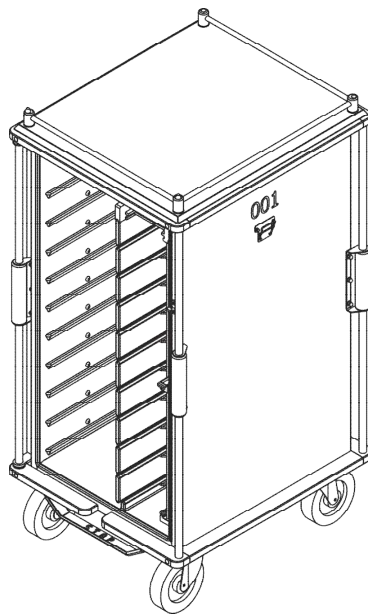


# Operating Instructions



## Tray Transport Trolleys TTW/CS

# 1 Introduction

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## 1.1 Appliance Information

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Appliance name	Tray Transport Trolleys
Appliance type/s	TTW/CS
Manufacturer	HUPFER® Metallwerke GmbH & Co. KG Dieselstraße 20 48653 Coesfeld Germany  Postfach 1463 48634 Coesfeld Germany   +49 2541 80 50  +49 2541 805 111  www.hupfer.de info@hupfer.de

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

Ensure that operating staff have been briefed regarding sources of danger and possible incorrect handling.

### **Subject to modifications**

The products covered by these operating instructions have been developed while taking into account market requirements and the latest technology. HUPFER® reserves the right to modify its products and associated 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.

### **Manual edition**

91345380\_A1

## 1.2 Table of Contents

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

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## 1.3 List of Abbreviations

Abbreviation	Definition																																				
BGR	German Employers' Liability Insurance Association rule ( <i>Berufsgenossenschaftliche Regel</i> )																																				
BGV	German Employers' Liability Insurance Association regulations ( <i>Berufsgenossenschaftliche Vorschrift</i> )																																				
CE	Communauté Européene European Community																																				
DIN	German Institute for Standardisation, technical regulations and technical specifications																																				
E/V	Spare or wearing part ( <i>Ersatz- bzw. Verschleißteil</i> )																																				
EC	European Community European Community																																				
EN	European Standard ( <i>Europäische Norm</i> ) Harmonised standard for the EU market																																				
HACCP	Hazard Analysis and Critical Control Points Hazard analysis of critical control points																																				
IP	International Protection. The abbreviation IP and a further two-digit index specify the protection class of a housing.  The first digit: Protection against ingress of solid foreign objects    The second digit: Protection against ingress of water																																				
	<table border="1"> <tbody> <tr> <td>0</td> <td>No protection against contact, no protection against ingress of solid foreign bodies</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 dripping water (vertically falling drops)</td> </tr> <tr> <td>2</td> <td>Protection against contact with the 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, 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, 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> </tbody> </table>	0	No protection against contact, no protection against ingress of solid foreign bodies	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 dripping water (vertically falling 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, 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, 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																																				
LMHV	Regulation on the hygiene of foodstuffs																																				
RCD	Residual Current Device Residual current device (RCD)																																				
STB	Safety temperature limiter																																				

## 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.
Check, inspect	Compare with certain conditions and/or characteristics such as damage, leaks, filling levels and heat.
Cleaning system-resistant	<p>The suitability of the appliance for cleaning in an automated cleaning system is limited. It is possible to achieve a flawless, reproducible cleaning and drying result, but it cannot be guaranteed.</p> <p>The exterior and interior housing are produced to standard specifications. Water ingressing hollow spaces resulting from the design of the appliance can run off without hindrance. Water collection in hollow spaces is avoided. Installed electrical components and electrical wiring are protected by appropriate sealing (for example, labyrinth edges, sealing profiles, cable channels) against any form of penetration by water. Protection class IPX6 (powerful pressurised water) to DIN EN 60529 (VDE 0470) is guaranteed. It is possible that water remains and is carried over following the drying process.</p>
Convection	Physical properties or mass transfer (e.g. heat or cold) through currents in gases and liquids.
Cook&Chill Kitchens	"Cook and Chill": Kitchens where warm food is chilled as quickly as possible after being cooked.
Cook&Serve Kitchens	"Cook and Serve": Kitchens where warm food is served immediately after being cooked or kept warm until it is consumed.
Corrosion	The chemical reaction of a metallic material with its surroundings, e.g. rust.
Cover	A bell-shaped cover for keeping food warm on plates and dishes.
Element formation	Also: contact corrosion. Occurs when different noble metals are in close contact with each other. This happens when a corrosive medium is between both metals, such as water or even normal air moisture.
EM field	Electrical, magnetic or electromagnetic field that is defined by its field intensity and phase formation.
EN tray	A European standard tray is a tray in a standard size. EN 1/1 corresponds to 20.9x14.6" (530x370 mm), EN 1/2 corresponds to 14.6x10.4" (370x265 mm).
Gastronorm	Gastronorm is a measurement system used worldwide in places such as 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 20.9 x 12.8" (530 x 325 mm). Items are available in different depths.
GN tray	A Gastronorm standard tray is a standard-size tray. GN 1/1 corresponds to 20.9x12.8" (530x325 mm), GN 1/2 corresponds to 12.8x10.4" (325x265 mm).
H1	Hygienic standard (NSF/USDA) for lubricants that are suitable for incidental and technically unavoidable contact with foodstuffs.
HACCP	HACCP is a preventive system that is designed to ensure the safety of foods and consumers.
Instructed person	An instructed person is a person who has been instructed on the possible risks resulting from improper behaviour when carrying out an assigned task and regarding the necessary protective equipment and protective measures, and who has been trained for this task, if necessary.
Lift	A movement, for example a vertical movement of the guide basket from bottom to top.
LMHV	German Regulations on the Hygiene of Foodstuffs Regulations regarding hygiene requirements for producing, handling and placing food on the market
Machine safety	The term machine safety refers to all the measures used to avert injury to persons. The basis for machine safety is directives and laws for protecting users of technical devices and systems valid nationally and across the EC.

Term	Definition
Passive layer	A non-metallic protective layer on a metallic material that prevents or slows down material corrosion.
Porcelain-Standard	Porcelain-Standard is a measurement system for porcelain plates drafted by HUPFER®. The basic size of Porcelain-Standard (PN) 1/1 is 8.7x6.3" (220x160mm) (1/2 PN conforms to 4.3x6.3" (110x160mm), 1/4 PN conforms to 6.3x3.1" (160x80 mm)). The fitting lids have the following dimensions: 1/1 PN 9x6.6" (228x168mm), 1/2 PN 4.4x6.3" (111x161mm), 1/4 PN 4.4x3.2" (111x81mm).
Protection class	<p><b>0</b>     —</p> <p><b>I</b>     </p> <p><b>II</b>    </p> <p><b>III</b>   </p>
Qualified person, qualified personnel	Qualified personnel are persons who due to their professional training, experience, instruction and their knowledge of relevant 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 potential hazards (definition of specialists according to IEC 364).
Schuko®	The abbreviation of the German term "Protective contact" indicates a system of domestic plugs and sockets equipped with protective earthed contacts used in most of Europe.
Specialist	A specialist is a person who can assess work assigned and can recognise possible hazards themselves based on their professional training, skills, experience and knowledge of the respective guidelines.
Suitable for washing devices	The appliance is suitable for cleaning in an automated cleaning system without restrictions. Following agreement with the manufacturer the cleaning system must achieve a hygienic, constant cleaning and drying result, which is to be approved by a third party (client).  The exterior and interior housing are manufactured to a standard guaranteeing hermetic sealing. It is not possible for water jets to ingress into hollow spaces in the appliance. Installed electrical components and electrical wiring are protected by appropriate sealing against any form of penetration by water. Protection class IPX6 (powerful pressurised water) to DIN EN 60529 (VDE 0470) is guaranteed. No water remains or is carried over following the drying process.
Verify, test	Compare with certain values such as weight, torque, content or temperature.
VESKA standard	Trays as per the VESKA standard are items used for distributing food in hospitals, principally in Switzerland; they measure 20.9x14.8" (530x375 mm).

## 1.5 Orientation of the Appliance

### The front

"The front" refers to the side where the door is arranged and at which the staff loads the appliance.

### The rear

"The rear" refers to the opposite side to the front. The rating plate is arranged on this side.

### The right

"The right" refers to the right hand side when viewed from the front side (front).

### The left

"The left" refers to the left hand side when viewed from the front side (front).




## 1.6 Notes on Using the Manual

### 1.6.1 Notes on the Manual Structure

This manual is divided into function- and task-focused sections.

### 1.6.2 Notes and their Representation used in all Sections

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 hazard</b>
	<p>There is an imminent threat to life and physical well-being for the user and / or third parties if instructions are not followed precisely or the circumstances described are not taken into account.</p> <p>The type of hazard is indicated by a symbol and explained in the accompanying text in more detail. The general symbol for danger is used in this example.</p>
<b>WARNING</b>	<b>Brief description of hazard</b>
	<p>There is an indirect threat to life and physical well-being for the user and / or third parties if the instructions are not followed precisely or the circumstances described are not taken into account.</p> <p>The type of hazard is indicated by a symbol and explained in the accompanying text in more detail. The general symbol for danger is used in this example.</p>
<b>CAUTION</b>	<b>Brief description of hazard</b>
	<p>There is a potential risk of injury or property damage if the instructions are not followed precisely or the circumstances described are not taken into account.</p> <p>The type of hazard is indicated by a general symbol and explained in the accompanying text in more detail. The general symbol for danger is used in this example.</p>
<b>NOTE</b>	<b>Brief description of additional information</b>
	<p>Attention is pointed to special conditions or additional important information on the topic concerned.</p>
<b>INFO</b>	<b>Short title</b>
	<p>It contains additional information on work ease or recommendations on the topic concerned.</p>



## 2 Safety Instructions

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### 2.1 Introduction

---

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

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

The valid national and international Safety at Work Regulations must be complied with. The manufacturer 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 Health and Safety rules of the German Federation of the Statutory Accident Insurance Institutions for the Industrial Sector, 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

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

The following symbols may be used:



General hazard area

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### 2.3 Safety Instructions for Appliance Safety

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The appliance is operated safely if it is used correctly and carefully. Negligent handling of the appliance can lead to a threat to life and physical well-being for the user and / or third parties as well as hazards for the appliance itself and the operator's other 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 operating and actuating elements must be in a perfect and fail-safe condition with regards to technical standards.
- Before putting the appliance into operation, the appliance must be checked for external visible damage and defects. In case of damage, inform immediately the competent bodies and switch off the tray transport trolley.
- Modifications or retrofits to the equipment are only permitted after consultation with the manufacturer and upon receipt of their consent in writing.
- The tray transport trolleys can start moving on their own and randomly if the casters are not locked with the total brakes.
- Release the total brakes before moving it. Moving the appliance when the total brakes are engaged can damage the chassis!
- Do not move the appliance over inclined surfaces or stairs. When approaching walls and moving round obstacles, always pay attention to persons or obstacles in the way.
- During traction operation it is not allowed to move the tray transport trolley faster than a walking pace. It is difficult to brake and steer heavily laden appliances.

- When moving the tray transport trolley make sure that the appliance will not tip over due to outside influences or inattention. If, nevertheless, it tips over never try to catch the tray transport trolley.
- Secure the tray transport trolley against rolling away by applying the total brakes before putting it into operation.

## 2.4 Safety Instructions for Transport

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

- When loading, use only hoists and load lifting devices approved for the weight of the appliance to be lifted.
- Use transport vehicles that are approved for the weight of the tray transport trolley.
- Do not put a defective appliance into operation under any circumstances and inform the supplier immediately in such a case.

## 2.5 Safety Instructions for Cleaning and Care

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The following aspects must be taken into account when performing any cleaning and care tasks:

- Observe applicable hygiene regulations and guidelines.
- Cleaning instructions must be strictly observed for reasons of hygiene.
- Tray transport trolleys are not suitable for washing devices.

## 2.6 Safety Instructions Regarding Fault Repair

---

The following aspects must be taken into account when carrying out any troubleshooting work:

- The local Accident Prevention Regulations in force must be observed.
- Observe the valid product safety regulations for the product when handling oils, greases and other chemical substances.
- Carry out all the checks and inspections of the appliance on a regular basis. Remove deficiencies, such as loose screw connections.
- Only authorised specialists may repair any faults or malfunctions.
- Only use original spare parts to replace defective components.

## 3 Description and Technical Data

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### 3.1 Performance Description

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Tray transport trolleys with thermal partition are intended for transportation and distribution of meals for Cook & Serve operation in the field of the food service industry, large-scale kitchens and catering establishments. They hold up portioned meals on special trays that have a warm and a cold area.

Tray transport trolleys with thermal partition are always pre-fitted with a lateral and upper holder for receiving cold storage plates.

Warm meals are kept at a certain temperature by means of hot wax pellets or inductive heatable bottom parts. The temperature of warm and cold meals can be maintained for up to one hour.

### 3.2 Proper Use

---

Tray transport trolleys with thermal partition are intended for receiving EN trays with specific geometry for receiving the partition. They serve for hygienic and economic transportation of prepared trays with warm and cold meals.

Tray transport trolleys with a circumferential gallery may transport objects that have a firm base and are placed over the non-slip pad to protect against falling down (such as crockery, cutlery and napkins in suitable transport containers or on trays). The top of the trolley may be loaded with up to 11.34 lbs (25 kg).

Proper use includes observing specified procedures, compliance with the technical specifications and use of supplied or optional original accessories.

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

### 3.3 Improper Use

---

Tray transport trolleys without a circumferential gallery are not intended to be used as a storing surface for items.

Transport of living beings, heavy and sharp-edged items, loose crockery items beyond the tray or stacks of crockery items is not permitted.

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

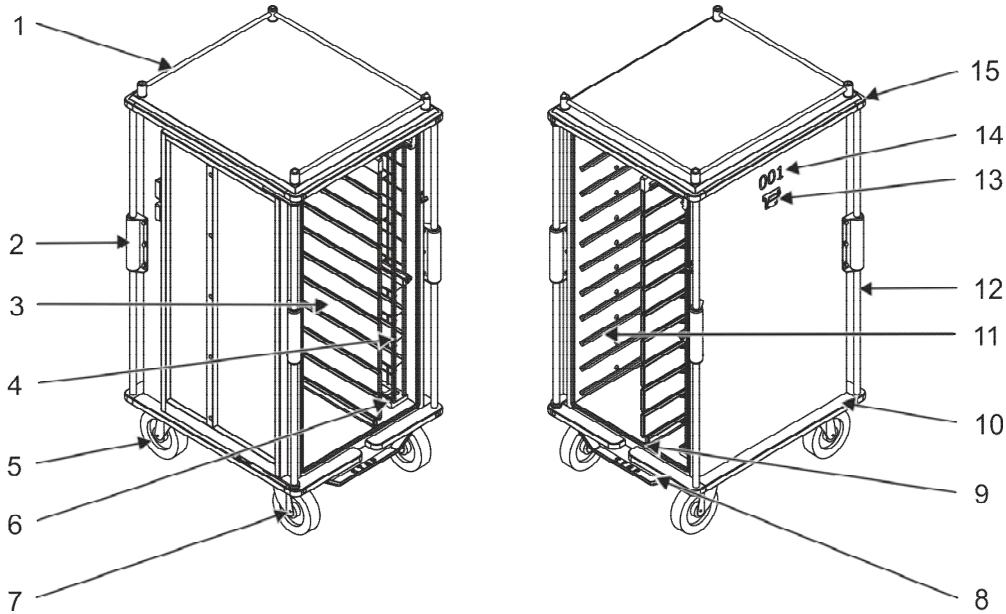
Tray transport trolleys may not be cleaned in the washing device.

Tray transport trolleys may be moved only with closed doors and only with the hands on the push bars.

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 View of the appliance TTW/CS



**Figure 1** View of the appliance TTW/CS

1	Gallery optional	9	Door seal
2	HGV impact protection	10	Lower peripheral frame
3	Partition	11	Tray beads
4	Wire side wall (with holder for cold storage plates)	12	Push bar
5	Fixed caster	13	Paper clamp optional
6	Condensate pan	14	Laser engraving optional
7	Swivel caster	15	Upper peripheral frame
8	Central lock tread optional		

### 3.4.2 Standard Equipment

The tray transport trolley is completely made of stainless steel.

The side panels are equipped with seamlessly deep-drawn tray beads at a distance of 4.5" (115 mm). Big radii and smooth surfaces enable an easy cleaning of the interior. The wire side wall can be removed for thorough cleaning of the appliance. The condensate pan underneath the cold storage plates collects condensation.

The double-walled hinged door is swivelling to an angle of 270° and can be locked. The 2-point locking mechanism safely locks the doors during transportation.

Corrosion-resistant fixed casters and swivel casters with total brakes in galvanised and chrome-plated housings ensure an optimal movement and manoeuvrability of the tray transport trolley.

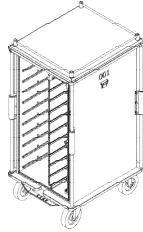
Due to the vertical push bars in the corners of the trolley it is possible to fully load the appliance and easily manoeuvre the device. The lower and upper peripheral frame offer an optimal bumper.

### 3.4.3 Equipment and Optional Accessories

The tray transport trolleys can be installed and fitted with optional accessories in various ways.

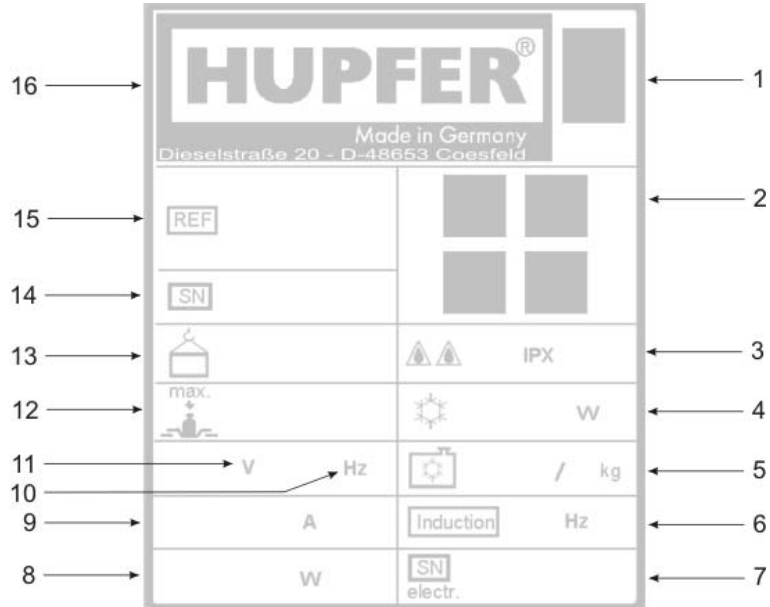
- **Gallery:**  
Ensures that items on the roof of the trolley are safely transported.
- **Central brake:**  
The optional central brake provides a firm hold during standby mode. One single foot control locks both swivel casters of the tray transport trolley.
- **Casters that can only roll in one direction (Rifix):**  
The optional casters that can only roll in one direction lock the swivel movement of a swivel caster in predefined directions. When the direction lock is activated, the swivel caster assumes the role of a fixed caster.  
Casters that can only roll in one direction are used wherever a lateral movement of the transport trolleys is required, e.g. for docking at the induction docking station (all four swivel casters) but towing operation in the form of a train behind electric towing devices (two casters that can only roll in one direction and two swivel casters) is also intended. The fixed caster function for directional stability is critically important in order to ensure that the transport trolleys move in a straight line. This applies especially to traction operation.
- **Casters made of stainless steel:**  
Stainless steel housing, plastic wheel, plate attachment
- **Paper clamp:**  
For position marking
- **Cold storage plates**
- **Trays:**  
EN trays with a special geometry for cold/hot area partition
- **HGV transport securing device**  
Can be installed on the push bars for added security.

## 3.5 Technical Data

	Dim.	TTW/CS 1/20 B-EN-115 PK
		
Width	in (mm)	31.5" (800)
Depth	in (mm)	37.1" (943)
Height	in (mm)	65.0" (1650) (caster diameter: 7.9" (200)) 63.4" (1610) (caster diameter: 6.3" (160))
Tare weight	lbs (kg)	72.6 (160)
Payload	lbs (kg)	45.4 (100)
Capacity		1x2x10 (20 trays)
Type of insertion		Width wise loading
Tray size	in (mm)	20.9x14.6" (530x370)
Cold storage plates	Number	max. 4
Cupboard compartments	Number	1
Hinged doors	Number	1

### 3.6 Rating Plate

The rating plate is arranged on the back of the tray transport trolley on the right above the bumper strip.



**Figure 2** Rating plate

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

## 4 Transport, Initial Operation and Taking out of Service

### 4.1 Transport

#### CAUTION



#### Damage to appliances caused by improper transport

Appliances should be safely secured when transported off site inside a vehicle such as a truck. If the appliances are not secured properly, there is a risk of property damage and personal damage caused by squashing.

Secure each individual separate appliance using suitable transport securing devices.

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

The tray transport trolley is usually delivered as an assembled unit, i.e. it is completely assembled.

The scope of delivery is specified in the shipping documents in accordance with the valid purchase agreement and included with the delivery item.

### 4.2 Setting Up and Putting into Operation

The installation and operation of the tray transport trolley must only be carried out by the manufacturer or personnel authorised by the manufacturer.

The tray transport trolley should be thoroughly cleaned with a soft cloth before putting it into operation for the first time. Ensure that the appliance is clean and dry before putting it into operation.

The functioning of the total brake on the swivel casters must be checked before putting it into operation.

#### INFO

#### Disposal of packing material

The packing consists of recyclable materials and can be disposed of accordingly. The different materials should be separated and disposed of in an environmentally friendly manner. The local agencies responsible for disposal must be contacted regarding removal.

### 4.3 Storage and Recycling

Appliances must be kept in a dry, frost-free environment when placed in temporary storage. The tray 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 damage and corrosion every 6 months.

#### NOTE

#### Condensation

Ensure that there is sufficient ventilation and no major variations in temperature in the storage location to prevent condensation from forming.

#### NOTE

#### Temporary storage

Tray transport trolleys that are not operated for a longer period of time should be temporarily stored with opened doors in order to prevent odours in the interior.

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

If the tray transport trolley is recycled, all operating and auxiliary materials must be disposed in an environmentally compatible manner. Recyclable materials must be properly separated and disposed of in an environmentally compatible manner in accordance with local Waste Disposal Regulations. The local agencies responsible for disposal must be contacted regarding removal. Separate the reusable materials of the appliance (casters and plastic parts) before disposing of or send the appliance to a recycling centre.

We offer our customers to dispose of 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 request it from [HUPFER®](#) - Service.



## 5 Operation

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### CAUTION



### Damage to appliances

The tray transport trolley may only be operated when it is in perfect condition with regards to technical standards. The appliance must be checked for visible external damage and defects each time before being operated.

In case of damage, immediately inform the competent bodies and do not put the tray transport trolley into operation.

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### 5.1 Operation

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#### Loading

- Lock the tray transport trolley with the total brakes to prevent from rolling back.
- Insert trays in the sideways guides.
- Close the doors and lock it with the transport safety device.
- Release the total brakes.
- Carefully push or pull the tray transport trolley to the destination place.

#### Unloading

- Release the total brake and roll the tray transport trolley to the destination.
- At the destination, lock the casters with total brakes.
- Unlock the doors.
- Remove the trays.

### 5.2 Measures at the End of Use

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Proceed as follows to switch off the tray transport trolley:

- Push or pull carefully the tray transport trolley (if necessary) to the destination place.
- Secure the casters with the total brakes.

## 6 Troubleshooting and Repair

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### 6.1 Instructions regarding Fault Repair

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Please contact our service partners in the event of a malfunction or complaints within the warranty period. Even after the warranty period has expired, you can have necessary repair work carried out by our service partners and qualified electricians.

Servicing should be carried out by authorised specialists only.

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

Always specify the information and corresponding part number indicated on the rating plate when contacting the after-sales service or ordering spare parts.

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

### 6.2 Fault and Action Table

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Fault	Possible cause	Remedy
The tray transport trolley pulls to the right or to the left when transporting	Damaged caster bearings	Replace defective casters
Total brakes do not have any locking action	Locking brakes are worn	Either renew the locking brakes or replace the defective casters
Running noise of casters	Defective caster bearings	Replace the casters
	Sticky surface of the casters	Clean with water

## 7 Cleaning and Care

### 7.1 Safety Measures

#### CAUTION

#### Appliance damages due to washing device



Tray transport trolleys are not suitable for washing devices.

Devices that are not suitable for washing devices can be damaged in the washing device when cleaned.

### 7.2 Hygiene Measures

It is essential for operating staff to act in the correct manner to ensure optimal hygiene.

All persons must have sufficient knowledge about the locally valid hygiene regulations, observe them and comply with them.

Use a waterproof plaster to cover wounds on hands and arms.

Never sneeze or cough on clean crockery or meals.

### 7.3 Cleaning and Care

If the tray transport trolley is handled with care, cleaned and maintained on a regular basis, it does not require any additional care measures.

To clean it regularly, wipe the interior and exterior of the tray transport trolley with a soft cloth. Use a soft cleaning cloth or an uncoated sponge for cleaning. Use degreasing liquid cleansers that are approved for the food industry.

Never use chloride-containing cleaning agents, abrasive cleaning powder or other dry cleaning agents, steel wool, steel sponges and/or sharp-edged items.

Dry well the appliance after carrying out wet cleaning, in order to prevent the development of mould, uncontrolled growth of germs and bacteria and, consequently, contamination of the appliance.

The holder for the cold storage plate has sufficient space for cleaning the rear wall, floor and roof of the trolley. For a more thorough cleaning the wall may also be removed without using tools.

Proceed as follows to remove the wall:

- Lift the wall.
- Tilt the lower edge above the holder to the side.
- Remove the wall.

#### 7.3.1 Cleaning and Care Measures

Cleaning and care measures	Action	daily	weekly	monthly	if required
Interior of the tray transport trolley	clean	x			
Interior of the tray transport trolley	disinfect		x		
Tray transport trolleys for mechanical damages	check			x	
Condensate pan at the bottom area	empty	x			
Air duct / upper condensation plate	empty	x			

## 7.4 Special Care Instructions

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Resistance to corrosion in stainless steel is provided by a passive layer which is formed on the surface when oxygen is absorbed. The oxygen in air is sufficient to form the passive layer, so that damage caused by physical action is eliminated automatically.

The passive layer develops or is renewed more quickly when the steel comes into contact with water containing oxygen. The passive layer can be chemically damaged or breached by agents which have a reducing (oxygen-consuming) effect when they come into contact with steel at concentrated levels or at high temperatures.

Such aggressive substances include:

- 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 handling appliances made of "refined stainless steel":

- Always keep the surface of appliances made from stainless steel clean and open to air.
- Use cleaning agents suitable for stainless steel. Never use bleaching cleaning agents or any containing chlorides.
- Remove layers of lime scale, grease, starch and egg-white by cleaning daily. Corrosion may occur underneath these layers due to lack of air absorption.
- After each cleaning operation remove all cleaning agent residues by wiping thoroughly. The surface should be thoroughly dried after wiping.
- Do not bring items made of stainless steel into contact with substances such as concentrated acids, seasonings and salts for longer than is absolutely necessary. Acid fumes emitted when tiles are cleaned also cause corrosion in "refined stainless steel".
- Avoid damaging the surface of the stainless steel, especially by bringing into contact with metals other than stainless steel.
- Residues from other metals produce extremely small amounts of chemical elements which can cause corrosion. Contact with iron and steel must be avoided at all costs, because it will cause extraneous rust. If stainless steel comes into contact with iron (steel wool, steel particles from pipes, water containing iron), this can trigger corrosion. Therefore, only use refined steel wool or brushes with natural, plastics or refined steel bristles only for physical cleaning. Steel wool or brushes with unalloyed steel cause extraneous rust due to abrasion.

## 8 Spare Parts and Accessories

Servicing may be carried out by authorised specialists only.

Defective components should only be replaced with HUPFER® original parts or identical spare parts. That is the only way to guarantee a safe operation. We would like to point out that a perfect functionality of the appliance can only be ensured if you use recommended original parts by HUPFER®. Unsuitable or partially suitable spare parts can void the warranty.

Spare parts and accessories can be ordered at HUPFER® Service (Tel. +49 2541 805-0). When ordering spare parts or in the event of after-sales service always specify the order number and specifications on the rating plate of the tray transport trolley.

On request, HUPFER® Service (Tel. +49 2541 805-0) provides recommendations and information about induction crockery, covers and trays.

### 8.1 Spare Parts and Accessories List

Spare part, item code	Item designation	Type	
0163959	Cold Storage Plate		
7500895	paper clamp	Stainless steel 90x70x18	
91336147	Air duct		
014000158	Fixed caster	Ø 6.3" (160 mm) T3/160, ball bearing UEP stainless steel	(Package contents: 1 unit 4000158-B)
014000152	Fixed caster	Ø 6.3" (160 mm) T1/160, caster bearing, galvanised	(Package contents: 1 unit 4000152-B)
014000157	Swivel caster	Ø 6.3" (160 mm) T3/160 with brake, ball bearing UEP stainless steel	(Package contents: 1 unit 4000157-B)
014000151	Swivel caster	Ø 6.3" (160 mm) T1/160, with brake, caster bearing, galvanised	(Package contents: 1 unit 4000151-B)
014000156	Swivel caster	Ø 6.3" (160 mm) T3/160, ball bearing UEP stainless steel	(Package contents: 1 unit 4000156-B)
014000150	Swivel caster	Ø 6.3" (160 mm) T1/160, caster bearing, galvanised	(Package contents: 1 unit 4000150-B)
014000175	Swivel caster	Ø 6.3" (160 mm) T3/160 ball bearings, suitable for wash machines, with thread guard, smooth-running plastic wheel, Rifix, stainless steel	
014000250	Swivel caster	Ø 6.3" (160 mm) plate T3 housing, stainless steel, suitable for wash machines, with thread guard, smooth-running plastic wheel/ball bearings, central brake, stainless steel	(Package contents: 1 unit 4000250)
014000208	Fixed caster	Ø 7.8" (200 mm) T3/200, ball bearing/UEP stainless steel	
014000202	Fixed caster	Ø 7.8" (200 mm) T1/200, caster bearing /galvanised	(Package contents: 1 unit 4000208-B)
014000206	Swivel caster	Ø 7.8" (200 mm) ball bearing/UEP stainless steel	(Package contents: 1 unit 4000202-B)
014000200	Swivel caster	Ø 7.8" (200 mm) T1/200, caster bearing /galvanised	(Package contents: 1 unit 4000206-B)
014000207	Swivel caster	Ø 7.8" (200 mm) T3/200 with brake, ball bearing/UEP stainless steel	(Package contents: 1 unit 4000200-B)
014000201	Swivel caster	Ø 7.8" (200 mm) T1/200 m, with brake, caster bearing / galvanised	(Package contents: 1 unit 4000207-B)
014000224	Swivel caster	Ø 7.8" (200 mm) T3/200 ball bearings, suitable for wash machines, with thread guard, smooth-running plastic wheel, Rifix, stainless steel	(Package contents: 1 unit 4000201-B)