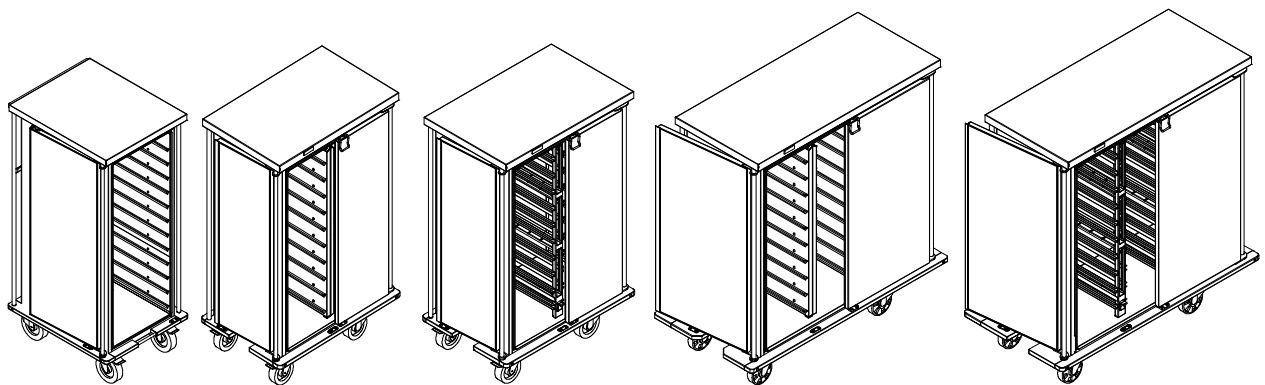


## Operating instructions



## Tray transport trolley TTW/V

# 1 Introduction

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## 1.1 Appliance Information

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Appliance name	Tray transport trolley
Appliance type/s	TTW/V
Manufacturer	HUPFER® Metallwerke GmbH & Co. KG Dieselstraße 20 48653 Coesfeld Germany  Postfach 1463 48634 Coesfeld Germany  ☎ +49 2541 80 50 📠 +49 2541 805 111  <a href="http://www.hupfer.de">www.hupfer.de</a> <a href="mailto:info@hupfer.de">info@hupfer.de</a>

Read through these operating instructions carefully to ensure safe operation and avoid damaging installations.

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**  
91275972\_A1

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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> )																																				
DIN	Deutsches Institut für Normung German Institute for Standardisation, technical regulations and technical specifications																																				
EC	European Community																																				
EN	European Standard ( <i>Europäische Norm</i> ) Harmonised standard for the EU market																																				
E/V	Spare or wearing part ( <i>Ersatz- bzw. Verschleißteil</i> )																																				
IP	<p>International Protection. The abbreviation IP and a further two-digit index specify the protection class of a housing.</p> <p>The first digit: Protection against ingress of solid foreign objects      The second digit: Protection against ingress of water</p> <table border="1"> <tbody> <tr> <td>0</td> <td>No protection against contact, no protection against ingress of solid foreign objects</td> <td>0</td> <td>No protection against ingress of water</td> </tr> <tr> <td>1</td> <td>Protection against contact with any large surface of the body such as the hand, protection against ingress of foreign objects <math>\varnothing &gt; 2.0''</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 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 $\varnothing > 2.0''$ (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																																				
RCD	Residual-current device (RCD) The use of the English term RCD (residual-current device) is customary in industrial standards in the EU.																																				

## 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 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.
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).
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.
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 12.8 x 20.9" (325 x 530mm). Items are available in different depths.
Check, inspect	Compare with certain conditions and/or characteristics such as damage, leaks, filling levels and heat.
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.
Passive layer	A non-metallic protective layer on a metallic material that prevents or slows down material corrosion.
Verify, test	Compare with certain values such as weight, torque, content or temperature.
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.
Instructed persons	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.

## 1.5 Orientation of the Appliance

### The front

The "front" refers to the side where the doors are 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.

### The left

The "left" refers to the left hand side when viewed from the front. The optional central total brake is installed on this side.

## 1.6 Notes on Using the Manual

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### 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>ATTENTION</b>	<b>Brief description of hazard</b>
	<p>There is a potential risk of injury or damage to property 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>Contains additional information on aspects which make work easier or recommendations on the topic concerned.</p>

---

## 2 Safety Instructions

---

### 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 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 section.

You must comply with the respectively valid national and international Safety at Work Regulations. 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

---

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

---

### 2.3 Safety Instructions for Appliance Safety

---

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 locks.
- Release the total locks before moving it. Moving the appliance when the total locks 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 locks before putting it into operation.

## 2.4 Safety Instructions for Transport

---

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

---

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

- Welded tray transport trolleys are only to a limited extent suitable for washing devices. Devices that are not suitable for washing devices can be damaged in the washing device when cleaned. For technical clarification always consult [HUPFER®](#) before the appliance is cleaned in a washing device.
- Observe applicable hygiene regulations and guidelines.
- Cleaning instructions must be strictly observed for reasons of hygiene.

## 2.6 Safety Instructions regarding Fault Repair

---

The following aspects must be taken into account when carrying out any fault repairs:

- 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. Remedy 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

---

Tray transport trolleys are intended for transportation and distribution of meals in the field of the food service industry, large-scale kitchens and catering establishments. They hold up prepared meals on GN or EN trays.

Thanks to their special design, welded tray transport trolleys meet the highest hygiene standards. The hinged doors can be locked at approx. 270° to allow an easy and thorough cleaning of the interior using a pressure washer or a hose.

Additionally, tray transport trolleys with passive cooling have a special middle wall which enables receiving cold storage plates. The usage of cold storage plates allows to keep meals cool for up to four hours.

### 3.2 Proper Use

---

The tray transport trolley is intended for receiving GN and EN trays. It serves for hygienic and economic transportation of prepared trays with warm or cold meals.

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

Tray transport trolleys that are coupled to induction docking stations may be loaded only with crockery and trays which are suitable for induction heating and released by HUPFER®.

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 55 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

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

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

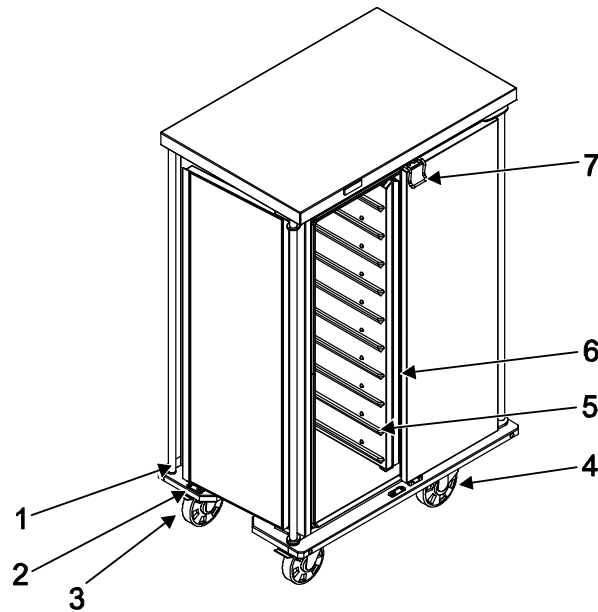
Tray transport trolleys that are coupled to induction docking stations may not be loaded with metal crockery, metal cutlery or meals covered with metal foil.

Tray transport trolleys may be moved only with closed doors and only with the hands on the push bars. Gallery bars are not suitable and can be damaged.

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

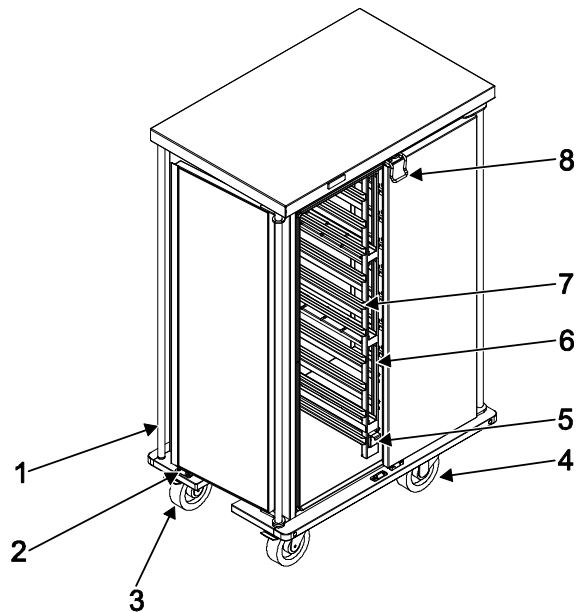
#### 3.4.1 View of the Appliance TTW



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

- |   |                               |   |                 |
|---|-------------------------------|---|-----------------|
| 1 | Push bar                      | 5 | Tray beads      |
| 2 | Door stop                     | 6 | Middle wall     |
| 3 | Swivel caster with total lock | 7 | 2-point locking |
| 4 | Fixed caster                  |   |                 |

#### 3.4.2 View of the Appliance TTW with Passive Cooling



**Figure 2** View of the appliance TTW/V with passive cooling

- |   |                               |   |  |
|---|-------------------------------|---|--|
| 1 | Push bar                      | 5 | Condensate pan                           |
| 2 | Door stop                     | 6 | Middle-wall for receiving cooling plates |
| 3 | Swivel caster with total lock | 7 | Tray beads                               |
| 4 | Fixed caster                  | 8 | 2-point locking                          |

### 3.4.3 Standard Equipment

The tray transport trolley is entirely made of stainless steel, benefits from double-walled insulation and has a welded interior.

The side walls are equipped with seamlessly deep-drawn beads at a distance of 4.5" (115 mm) (optionally also 3.7" (95 mm) or 4.1" (105 mm)).

The side walls of the tray transport trolleys can be equipped with an embossed tilt protection when they are not used together with inductive docking stations.

Smooth surfaces and the seamless fabrication of the side and middle walls enable an easy cleaning of the interior. The middle walls can be removed for a thorough cleaning of the appliance.

You can swing the hinged doors to an angle of approx. 270° and lock them. The 2-point locking mechanism safely locks the doors during transportation.

The design with vertical push bars in the corners of the trolleys ensures that they can easily be manoeuvred with the doors open or closed without any difficulty, even when fully loaded.

The corrosion-resistant swivel casters with total locks and fixed casters made of stainless steel ensure an optimal movement and manoeuvrability of the tray transport trolley.

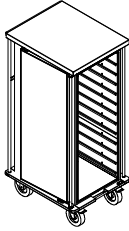
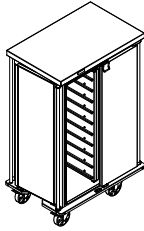
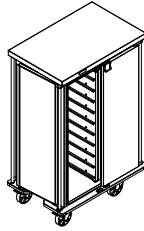
The lower peripheral frame made of shock-resistant plastic offers an optimal bumper and it is disconnected in the middle on the right and left sides for the optional installation of the coupling and drawbar.

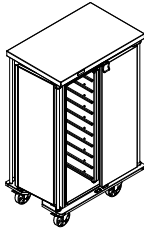
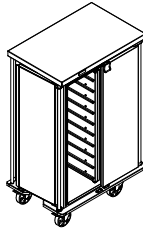
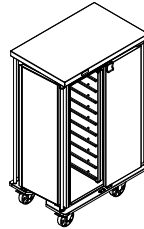
### 3.4.4 Equipment and Optional Accessories

You can install and fit the tray transport trolleys with optional accessories in various ways.

- **Gallery:**  
The gallery and a non-slip pad make it possible to use the top of the trolley as an additional and secure storage surface. The top of the trolley may be loaded with up to 55 lbs (25 kg).
- **Central total brake:**  
The optional central total brake provides a firm hold during operation and standby mode. One single foot control locks the swivel casters of the tray transport trolley.
- **Casters that can only roll in one direction (Rifix):**  
Casters fitted with Rifix can be fixed to roll in one direction only. This significantly facilitates the directional stability, e.g., during traction operation.
- **Coupling and drawbar:**  
For the connection of several tray transport trolleys for traction operation. The simple version is also available in combination with casters that are movable in only one direction. The second option with friction damping enables the directional stability during traction operation even in tight bends.
- **Shelf for beverage containers with lengthwise or crosswise insertion.**
- **Stacking basket, stainless steel, plastic-coated, lengthwise insertion.**
- **Card holder**
- **Connecting components for induction docking stations.**
- **Trays:**  
Tray transport trolleys are intended for the use of EN trays and GN trays. Suitable systems are e.g. [HUPFER® SDS](#) trays.
- **Induction crockery**  
Generally, all standard induction crockery can be used in combination with tray transport trolleys and induction docking stations. Since the manufacturers sometimes use different coatings, the power consumption is always dependent from the used crockery when the device setting is identical. When it deviates from the standard then a fine tuning between the device and the crockery is always necessary. This fine tuning must be done by the manufacturer or the service technicians authorized by the manufacturer.  
On request, recommendations for induction crockery are made available. Isolating covers for the main course dishes (deep plate Ø 9.4" to 10.2" (240 to 260 mm) and stew bowls Ø 6.7" to 7.5" (170 to 190 mm) are also available as a special accessory.

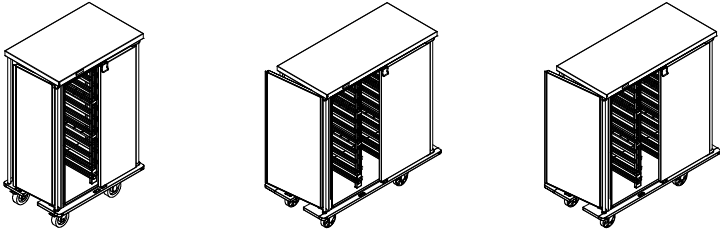
### 3.5 Technical Data

		Dim.	TTW/V 1/24 B-EN/GN-115	TTW/V 2/16 L-EN-115	TTW/V 2/20 L-EN-115
					
Width	in (mm)		30.5 (775)	41.3 (1049)	41.3 (1049)
Depth	in (mm)		36.8 (935)	27.2 (691)	27.2 (691)
Height	in (mm)		74.2 (1886)	54.5 (1384)	63.5 (1614)
Tare weight	lbs (kg)		335 (152)	282.1 (128)	319.6 (145)
Payload	lbs (kg)		264.5 (120)	176.3 (80)	220.4 (100)
Capacity			1 x 24	2 x 8	2 x 10
Type of insertion			Crosswise insertion	Lengthwise insertion	Lengthwise insertion
Tray size	in (mm)		20.9x14.6 (530x370) 20.9x12.8 (530x325)	20.9x14.6 (530x370)	20.9x14.6 (530x370)
Cupboard compartments	Number		1	2	2
Hinged doors	Number		1	2	2
max. speed in traction operation	km/h		4	4	4

		Dim.	TTW/V 2/24 L-EN 115	TTW/V 2/24 L-GN 115	TTW/V 2/32 B-EN-115
					
Width	in (mm)		41.3 (1049)	41.3 (1049)	53.9 (1369)
Depth	in (mm)		27.2 (691)	27.2 (691)	36 (915)
Height	in (mm)		72.6 (1844)	72.6 (1844)	54.6 (1386)
Tare weight	lbs (kg)		352.7 (160)	361.5 (164)	381.4 (173)
Payload	lbs (kg)		264.5 (120)	264.5 (120)	176.4 (80)
Capacity			2 x 12	2 x 12	2 x 16
Type of insertion			Lengthwise insertion	Lengthwise insertion	Crosswise insertion

	Dim.	TTW/V 2/24 L-EN 115	TTW/V 2/24 L-GN 115	TTW/V 2/32 B-EN-115
Tray size	in (mm)	20.9x14.6 (530x370)	20.9x12.8 (530x325)	20.9x14.6 (530x370)
Cupboard compartments	Number	2	2	2
Hinged doors	Number	2	2	2
max. speed in traction operation	km/h	4	4	4

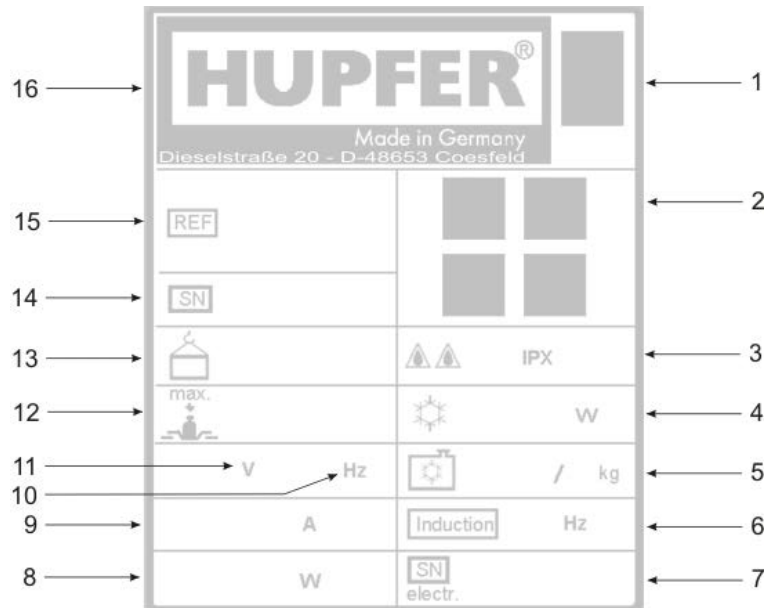
### Passive cooling

	Dim.	TTW/V 2/20 L-EN-115-PK	TTW/V 3/24 L-EN PK	TTW/V 3/30 L-EN-115-PK
				
Width	in (mm)	41.3 (1049)	61.6 (1563)	61.6 (1563)
Depth	in (mm)	27.2 (691)	31.5 (801)	31.5 (801)
Height	in (mm)	63.5 (1614)	52.5 (1334)	61.6 (1564)
Tare weight	lbs (kg)	319.6 (145)	368.1 (167)	379.1 (172)
Payload	lbs (kg)	220.4 (100)	264.5 (120)	330.7 (150)
Capacity		2 x 10	3 x 8	3 x 10
Type of insertion		Lengthwise insertion	Lengthwise insertion	Lengthwise insertion
Tray size	in (mm)	20.9x14.6 (530x370)	20.9x14.6 (530x370)	20.9x14.6 (530x370)
Cupboard compartments	Number	2	3	3
Hinged doors	Number	2	3	3
Max. speed in traction operation	km/h	4	4	4

You can find the corresponding certification marks on our homepage at [www.hupfer.de](http://www.hupfer.de).

### 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 3** Rating plate

1	Disposal of old appliances	9	Nominal current
2	Certification mark	10	Frequency
3	Protection class	11	Nominal voltage
4	Chilling 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

#### ATTENTION

#### 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 damage to property and harm to persons 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 that are 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 operating elements 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, so that condensation is prevented from forming.

#### NOTE

#### Temporary storage

Tray transport trolleys that are not operated for a longer period should be placed in temporarily storage with their doors open to prevent odours forming in the interior.

The appliance must be clean and dry before it is placed back into use.

If the tray transport trolley is recycled, all operating and auxiliary materials must be disposed of in an environmentally compatible manner. The recyclable materials must be properly separated and disposed of in an environmentally compatible manner according to the local Waste Disposal Regulations. The local agen-



cies 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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### ATTENTION

#### 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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### ATTENTION

#### Appliance damages



Heavily loaded tray transport trolleys can roll and tip over during the traction operation. Do not exceed the maximum traction speed of 2.5 mph (4 km/h). The maximum speed applies for flat and dry concrete and a path width of at least 98.4" (2.5 m).

You can join up to three tray transport trolleys in a row. Reduce the traction speed accordingly when changing a parameter.

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### NOTE

#### Inductive operation

Only appropriate induction crockery released by HUPFER with portioned meals on the intended markings of the trays may be used when the tray transport trolley is used together with the inductive docking station.

During operation, there should be no GN containers, cutlery or any other metal objects inside the tray transport trolleys.

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#### Loading

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

#### Unloading

- Release the total lock and roll the tray transport trolley to the destination.
- At the destination, lock the casters with the total locks.
- 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 locks.

## 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. 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	Action
The tray transport trolley pulls to the right or to the left when transporting	Damaged caster bearings	Replace defective casters
Total locks 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

#### ATTENTION

#### Appliance damages due to washing device



Tray transport trolleys are only optionally suitable for washing devices. Devices that are not suitable for washing devices can be damaged in the washing device when cleaned. For technical clarification always consult **HUPFER®** before the appliance is cleaned in a washing device.

### 7.2 Hygiene Measures

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

All persons must be informed 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 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 middle wall has sufficient space for cleaning the rear wall, floor and roof of the trolley. For a more thorough cleaning you can remove the middle wall also without using tools.

Proceed as follows to remove the middle wall proceed:

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

## 7.4 Special Care Instructions

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Resistance to corrosion in stainless steels 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 parts 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. You must therefore 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 should 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 must inform you that a perfect functionality of the appliance can only be ensured if you use recommended original parts by **HUPFER®**. No or only conditionally suitable spare parts may jeopardise 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.

### 8.1 Spare Parts and Accessories List

014000158	Fixed caster	Ø6.2" (160mm,) ball bearing	Stainless-steel housing, suitable for washing devices
014000152	Fixed caster	Ø6.2" (160mm), caster bearing	Steel housing galvanised
014000157	Swivel caster	Ø6.2" (160mm), brake, ball bearing	Stainless-steel housing, suitable for washing devices
014000151	Swivel caster	Ø6.2" (160mm), brake, caster bearing	Steel housing galvanised
014000156	Swivel caster	Ø6.2" (160mm), ball bearing	Stainless-steel housing, suitable for washing devices
014000150	Swivel caster	Ø6.2" (160mm), caster bearing	Steel housing galvanised
014000175	Swivel caster	Ø6.2" (160mm), direction lock, ball bearing, thread guard	Stainless-steel housing, suitable for washing devices
014000250	Swivel caster	Ø6.2" (160mm), central brake, ball bearing, thread guard	Stainless-steel housing, suitable for washing devices
014000208	Fixed caster	Ø7.8" (200mm), ball bearing	Stainless-steel housing, suitable for washing devices
014000202	Fixed caster	Ø7.8" (200mm,) caster bearing	Steel housing galvanised
014000206	Swivel caster	Ø7.8" (200mm), ball bearing	Stainless-steel housing, suitable for washing devices
014000200	Swivel caster	Ø7.8" (200mm), caster bearing	Steel housing galvanised
014000207	Swivel caster	Ø7.8" (200mm), brake, ball bearing	Stainless-steel housing, suitable for washing devices
014000201	Swivel caster	Ø7.8" (200mm), brake, caster bearing	Steel housing galvanised
014000224	Swivel caster	Ø7.8" (200mm,) direction lock, ball bearing, thread guard	Stainless-steel housing, suitable for washing devices
014000251	Swivel caster	Ø7.8" (200mm), central brake, ball bearing, thread guard	Stainless-steel housing, suitable for washing devices
0124489	Cold Storage Plate	1/1 GN	
0163324	Cold Storage Plate	1/1 GN with grip holes	
0163040	Tray	1/2 EN with centre bar	
0163356	Tray	1/1 EN separated for thermal partition	
0163034	Tray	1/1 GN separated for thermal partition, with 2 induction positions	
0124553	Shelf for beverage containers	Lengthwise insertion: Width 370 mm	
0124552	Shelf for beverage containers	Lengthwise insertion: Width 530 mm	

7215010	Stacking slide basket	530/370/108, Stainless steel, plastic-coated	
0162628	Card holder	107/72/44 attachable	
7500895	Paper clamp	Stainless steel 90/18/70	
0163218	Gallery	revolving, for TTW 1	
0163219	Gallery	revolving, for TTW 2	
0162961	Connection components	for IAS	