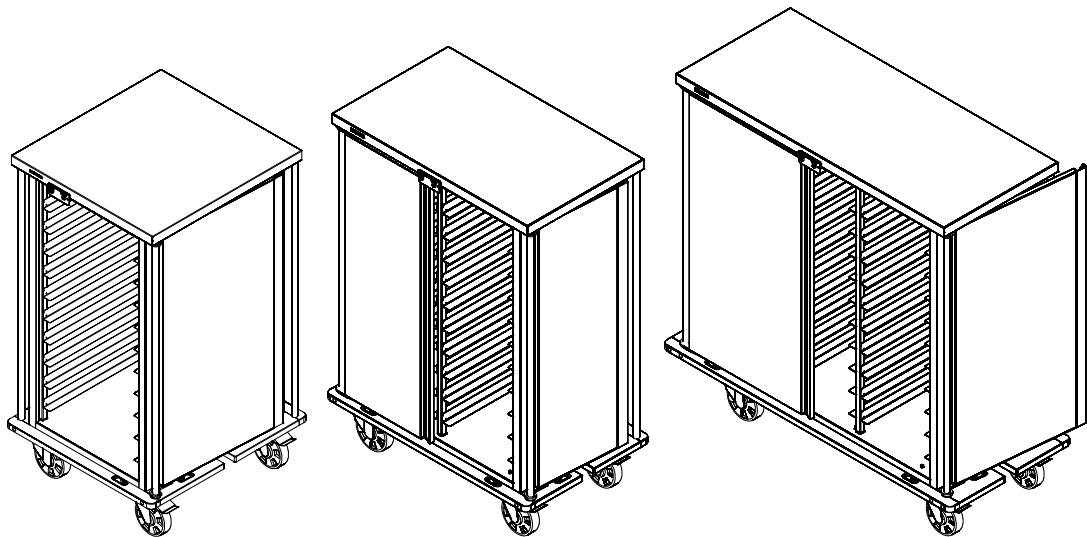


# Operating Instructions



## Tray transport trolley ETT

# 1 Introduction

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## 1.1 Appliance Information

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Appliance designation

Tray transport trolley

Appliance type/s

ETTW

Manufacturer

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Read and understand these operating instructions 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 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**

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## 1.3 List of Abbreviations

Abbreviation	Definition	
BGR	Employer's Liability Insurance 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	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	
	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 $\varnothing > 1.9''$ (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, 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 with a $\varnothing > 0.4''$ (1 mm); protection against foreign objects $\varnothing > 0.4''$ (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	
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 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.
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 with a standard size. EN 1/1 corresponds to 20.8 x 14.5 " (530x370 mm)
Specialist	A specialist is a person who can evaluate work assigned and can individually recognise any possible dangers due to professional training, specialist knowledge and experience as well as knowledge of the respective guidelines.
Gastronorm	Gastronorm is a measurement system applied worldwide, for instance, in food processing plants or large-scale kitchens. The use of standardised sizes makes it possible to exchange food pans. The basic size of the Gastronorm (GN) 1/1 is 20.9x12.8" (530x325mm). 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 personnel	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.
Suitable for washing devices	The device 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. The degree of protection IPX6 (powerful water jets) to DIN EN 60529 (VDE 0470) is guaranteed. No water remains or is carried over following the drying process.

Term	Definition
Cleaning system resistant	<p>The device is only conditionally suitable for cleaning in an automated cleaning system. 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. The degree of protection IPX6 (powerful water jets) to DIN EN 60529 (VDE 0470) is guaranteed. It is possible that water can remain and be carried over following the drying process.</p>
VESKA standard	Trays as per the VESKA standard are items used for distributing food in hospitals, principally in Switzerland; they measure 20.8 x 14.7" (530x375 mm).

## 1.5 Orientation Guide

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### **The front**

"The front" means the side where the doors are arranged and at which the staff loads the appliance.

### **The rear**

"The rear" denotes the opposite side of the front side (the front). The rating plate is arranged on this side.

### **The right**

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

### **The left**

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




## 1.6 Notes on Use of Manual

### 1.6.1 Notes on the Manual Structure

This manual is structured in functional and task orientated chapters.

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

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

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



## 2 Safety Instructions

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### 2.1 Introduction

---

The chapter 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 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

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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

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### 2.3 Safety Instructions for Appliance Safety

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

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

- The appliance may only be operated as intended, when it is in perfect condition with regards to technical standards, with awareness of safety and hazards and in accordance with the operating instructions.
- All the operating and actuating elements must be in a perfect and functionally reliable condition with regards to technical standards.
- The appliance must be checked for external visible damage and defects whenever it is put into operation. In case of damages, inform immediately the competent bodies and switch off the tray transport trolley.
- Modifications or retrofits of the equipment are only permitted in consultation with the manufacturer and on receipt of his written agreement.
- 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 with the total brakes locked 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 train 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.
- In no case put a defective appliance into operation and inform the supplier immediately.

## 2.5 Safety Instructions for Cleaning and Care

---

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

- Observe applicable hygiene regulations and guidelines.
- For reasons of hygiene the cleaning instructions must be strictly observed.
- Single-walled tray trolleys are not resistant to or suitable for washing devices.

## 2.6 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.
- 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 deficiencies, such as loose screw connections.
- Only authorised specialists may perform all repair work.
- Defective components should only be replaced with original spare parts.

## 3 Description and Technical Data

---

### 3.1 Performance Description

---

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

Tray transport trolleys can be configured in a wide variety of versions and may be fitted with optional accessories.

### 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 with a peripheral 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 roof of the trolley may be loaded with up to 55 lbs (25 kg)

Proper use includes observing defined procedures, compliance with the stated specifications and use of supplied or additionally available 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 peripheral gallery are not intended to be used as a storing surface for items.

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

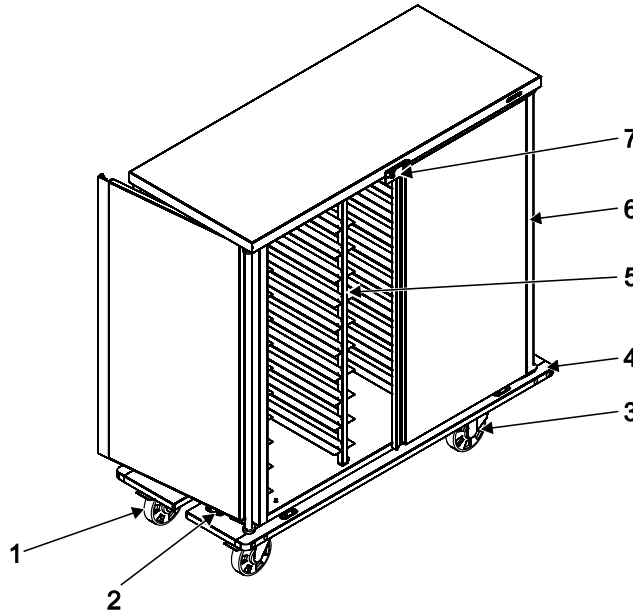
Tray transport trolleys may not be cleaned in the washing device.

Tray transport trolleys may be moved only with 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 ETTW 3/30



**Figure 1** View of the appliance ETTW 3/30

- |                                  |                       |
|----------------------------------|-----------------------|
| 1 Swivel caster with total brake | 5 Support ledge frame |
| 2 Door stop                      | 6 Push bar            |
| 3 Fixed caster                   | 7 Transport lock      |
| 4 Bumper strip                   |                       |

### 3.4.2 Appliance description

The tray transport trolley is completely made of stainless steel and is single-walled. The trays are inserted into support ledge frames. Tray racks are available with three different interspace widths; trays can be inserted lengthways or crossways, depending on the model design. Smooth side walls and removable support ledge frames facilitate the thorough cleaning of the interior. You can swing the hinged doors to an angle of 270° and lock them. The transport lock securely locks the doors during transportation. The design with vertical push bars in the corners of the trolleys ensures that even when fully loaded they can easily be manoeuvred with the doors open or closed without any difficulty. The lower peripheral frame made of shock-resistant plastic offers an optimal bumper and on the right and left sides it is disconnected in the mid for the optional installation of the coupling and drawbar. Casters are available in different sizes and designs and ensure optimum movement and manoeuvrability for the unit.

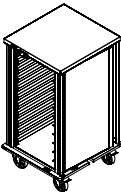
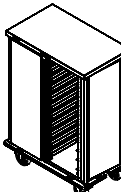
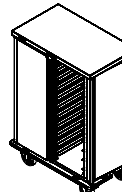
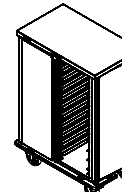
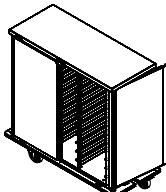
### 3.4.3 Equipment and optional accessories

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 standby mode. One single foot control locks both swivel casters of the tray transport trolley.
- **Casters that can only roll in one direction (Rifix):**  
Directional casters with central lock tread Casters fitted with Rifix can be fixed to roll in one direction only. This significantly facilitates the directional stability, e.g., during train operation. Not suitable for casters with Ø 125 mm (4.9")

- Casters made of stainless steel:  
Stainless steel housing, plastic wheel, plate attachment
- Coupling and drawbar:  
For the connection of several tray transport trolleys for train 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 train operation even in tight bends.
- Shelf for beverage containers with lengthwise or crosswise insertion
- Card holder for inserting into the gallery
- Cold storage plates for appliances with passive cooling
- Trays:  
Tray transport trolleys are intended for the use of EN trays and GN trays. VESKA trays are also possible as are systems suitable for 1/2GN trays in some cases, such as HUPFER® SDS trays.

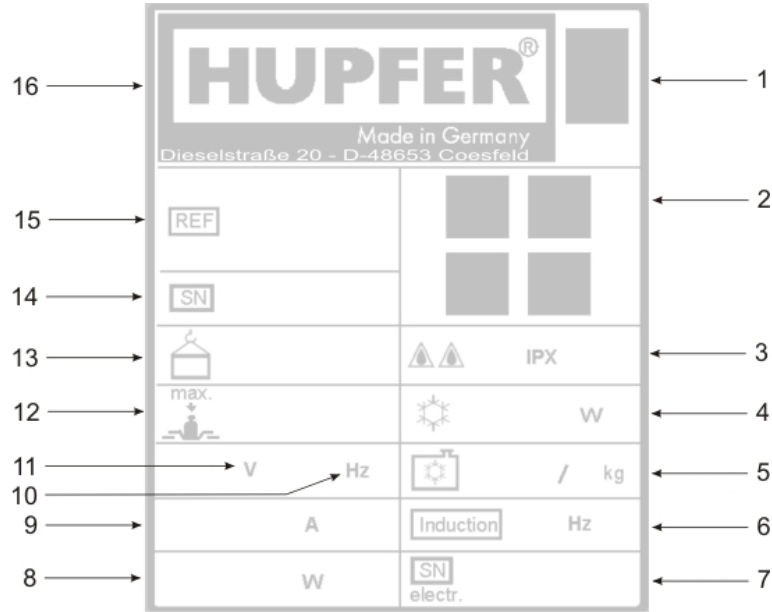
### 3.5 Technical Data

	Dim.	ETTW	ETTW	ETTW	ETTW	ETTW
						
		ETTW with a cabinet	ETTW with two cabinets	ETTW with two cabinets	ETTW with two cabinets	ETTW with three cabinets
Width	in (mm)	22.4 (560)	44.09 (1120)	31.8 (810)	31.8 (810)	47.85 (1215.5)
Depth	in (mm)	29.9 (760)	29.9 (760)	21.6 (550)	21.6 (550)	21.6 (550)
Height	in (mm)	33.6 – 49.01 (855 – 1245)	33.6 – 49.01 (855 – 1245)	33.6 – 49.01 (855 – 1245)	33.6 – 49.01 (855 – 1245)	33.6 – 49.01 (855 – 1245)
Own weight	lbs (kg)	see rating plate	see rating plate	see rating plate	see rating plate	see rating plate
Payload	lbs (kg)	see rating plate	see rating plate	see rating plate	see rating plate	see rating plate
Tray inter-space width	in (mm)	3.7 (95)	3.7 (95)	3.7 (95)	3.7 (95)	3.7 (95)
		4.1 (105)	4.1 (105)	4.1 (105)	4.1 (105)	4.1 (105)
		4.5 (115)	4.5 (115)	4.5 (115)	4.5 (115)	4.5 (115)
Tray capacity	Pc.	16	32	16	32	24
		20	40 48	20 24	40	30
Way of insertion		Sideways insertion	Sideways insertion	Lengthwise insertion	Sideways insertion	Lengthwise insertion
Tray size	in (mm)	20.8 x 14.5 (530 x 370) (EN)	20.8 x 14.5 (530 x 370) (EN)	20.8 x 14.5 (530 x 370) (EN)	10.4 x 14.5 (265 x 370) (½ EN)	20.8 x 14.5 (530 x 370) (EN)
		20.8 x 12.7 (530 x 325) (GN)	20.8 x 12.7 (530 x 325) (GN)	20.8 x 12.7 (530 x 325) (GN)		20.8 x 12.7 (530 x 325) (GN)
		20.8 x 14.7 (530 x 375) (VESKA)	20.8 x 14.7 (530 x 375) (VESKA)	20.8 x 14.7 (530 x 375) (VESKA)	20.8 x 14.7 (530 x 375) (VESKA)	20.8 x 14.7 (530 x 375) (VESKA)
Cup-board compartments		1	2	2	2	3
Hinged doors		1	2	2	2	2

	Dim.	ETTW	ETTW	ETTW	ETTW	ETTW
max. speed in train operation	mph (km/h)	4	4	4	4	4

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

## 4 Transport, Putting into Operation and Decommissioning

### 4.1 Transport

#### ATTENTION



#### Appliance damages caused by improper transport

In the case of off-site transport in a vehicle such as a lorry, the appliances should be secured properly. 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.

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

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

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

### 4.2 Setting up and Putting into Operation

The installation and operation of the tray transport trolley can be done only by the manufacturer or the authorised personnel.

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

### 4.3 Storage and Recycling

Temporary storage must take place in a dry and frost-free environment. 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 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.

#### 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 required to be recycled, all the 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.

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

---

### ATTENTION

#### Appliance damages



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 external visible damages and defects before each operation.

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

---

### 5.1 Operation

---

### WARNING

#### Appliance damages



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

You can tighten up to the tray transport trolley Tray transport trolleys in a row. Reduce the traction speed according to a change of a parameter.

---

#### Loading

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

#### Unloading

- At the destination, lock the casters with total brakes.
- Unlock the doors.
- Remove trays.

### 5.2 Measures at the End of Operation

---

To switch off the tray transport trolley, proceed as follows:

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

## 6 Troubleshooting and Repair

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### 6.1 Notes on Troubleshooting

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Please contact our service partners in case of malfunction and 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 certified electricians.

Service work should only be carried out by authorised specialists.

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 data and corresponding part number indicated on the rating plate when using the after-sales service or ordering spare parts.

Regular inspection and maintenance of the appliance prevent disruptions to operation 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 brakes do not have any locking action	Total brakes are worn	Either renew the total 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 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

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 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 for cleaning a soft cleaning cloth or an uncoated sponge. 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.

To remove the middle wall proceed as follows:

- 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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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 of stainless steel into contact with substances such as concentrated acids, seasonings and salts 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

Service work should only be carried out by authorised specialists.

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.

### 8.1 Spare Parts and Accessories List

014000158	Fixed caster	Ø 160 mm (6.3") T3/160, ball bearing stainless steel	(Package contents: 1 piece 4000158-B)
140 (014000152)	Fixed caster	Ø 160 mm (6.3") T1/160, caster bearing, galvanised	(Package contents: 1 piece 4000152-B)
140 (014000157)	Swivel caster	Ø 160 mm (6.3") T3/160 with total brake, ball bearing stainless steel	(Package contents: 1 piece 4000157-B)
140 (014000151)	Swivel caster	Ø 160 mm (6.3") T1/160, with total brake, caster bearing, galvanised	(Package contents: 1 piece 4000151-B)
140 (014000156)	Swivel caster	Ø 160 mm (6.3") T3/160, ball bearing stainless steel	(Package contents: 1 piece 4000156-B)
140 (014000150)	Swivel caster	Ø 160 mm (6.3") T1/160, caster bearing, galvanised	(Package contents: 1 piece 4000150-B)
140 (014000175)	Swivel caster	Ø 160 mm (6.3") T3/160 ball bearings, suitable for wash machines, with thread guard, smooth-running plastic wheel, Rifix, stainless steel	
014000250	Swivel caster	Ø 160 mm (6.3") plate T3 housing, stainless steel, suitable for wash machines, with thread guard, smooth-running plastic wheel/ball bearings, total lock, stainless steel	(Package contents: 1 piece 4000250)
014000208	Fixed caster	Ø 200 mm (7.8") T3/200, ball bearing stainless steel	
014000202	Fixed caster	Ø 200 mm (7.8") T1/200, caster bearing /galvanised	(Package contents: 1 piece 4000208-B)
140 (014000206)	Swivel caster	Ø 200 mm (7.8") ball bearing stainless steel	(Package contents: 1 piece 4000202-B)
140 (014000200)	Swivel caster	Ø 200 mm (7.8") T1/200, caster bearing /galvanised	(Package contents: 1 piece 4000206-B)
140 (014000207)	Swivel caster	Ø 200 mm (7.8") T3/200 m with total brake, ball bearing stainless steel	(Package contents: 1 piece 4000200-B)
140 (014000201)	Swivel caster	Ø 200 mm (7.8") T1/200 m, with total brake, caster bearing / galvanised	(Package contents: 1 piece 4000207-B)
140 (014000224)	Swivel caster	Ø 200 mm (7.8") T3/200 ball bearings, suitable for wash machines, with thread guard, smooth-running plastic wheel, Rifix, stainless steel	(Package contents: 1 piece 4000201-B)