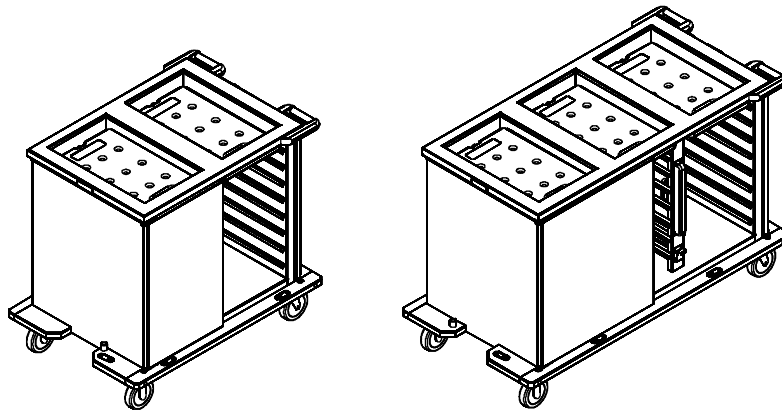


## Operating Instructions



## Cold Food Mobile Bain Marie

KSPA-2 | KSPA-3

# 1 Introduction

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## 1.1 Appliance Information

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Appliance designation	Cold Food Mobile Bain Marie
Appliance type/s	KSPA-2   KSPA-3
Manufacturer	HUPFER® Metallwerke GmbH & Co. KG Dieselstrasse 20 48653 Coesfeld  P.O. Box 1463 D-48634 Coesfeld   +49 2541 805-0  +49 2541 805-111  www.hupfer.de info@hupfer.de

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

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

### **Subject to modifications**

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

**Manual edition**  
4330040\_A2

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## 1.3 List of Abbreviations

Abbreviation	Definition																																				
BGR	Rule of the Professional Association																																				
BGV	Regulation of the Professional Association																																				
CE	Communauté Européenne European Community																																				
BGR	Rule of the Professional Association																																				
DIN	Deutsches Institut für Normung German Institute for Standardisation, technical regulations and technical specifications																																				
EC	European Community European Union																																				
EN	European Standard Harmonised standard for the EU market																																				
E/V	Spare and wearing part																																				
HACCP	Hazard Analysis and Critical Control Points Hazard Analysis of Critical Control Points																																				
IP	<div>International Protection. The abbreviation IP and a further two-digit index specify the protection class of a housing.</div> <div>The first digit:: Protection against ingress of solid foreign objects    The second digit: Protection against ingress of water</div> <table><tr><td>0</td><td>No protection against contact, no protection against ingress of solid foreign objects</td><td>0</td><td>No protection against ingress of water</td></tr><tr><td>1</td><td>Protection against contact with any large surface of the body such as the hand, protection against ingress of foreign objects <math>\varnothing &gt; 1.97''</math> (50 mm)</td><td>1</td><td>Protection against vertically falling water drops</td></tr><tr><td>2</td><td>Protection against contact with 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, thick wires or similar objects of <math>\varnothing &gt; 0.1''</math> (2.5 mm ), protection against foreign objects <math>\varnothing &gt; 0.1''</math> (2.5 mm ),</td><td>3</td><td>Protection against water drips at any angle up to 60° from the vertical</td></tr><tr><td>4</td><td>Protection against contact with tools, thick wires or similar objects <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 strong water spray</td></tr><tr><td></td><td></td><td>7</td><td>Protection against ingress of water during temporary immersion</td></tr><tr><td></td><td></td><td>8</td><td>Protection against pressurised water during continuous immersion</td></tr></table>	0	No protection against contact, no protection against ingress of solid foreign objects	0	No protection against ingress of water	1	Protection against contact with any large surface of the body such as the hand, protection against ingress of foreign objects $\varnothing > 1.97''$ (50 mm)	1	Protection against vertically falling water drops	2	Protection against contact with 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 $\varnothing > 0.04''$ (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 strong water spray			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																																				

## 1.4 Definitions of Terms

Term	Definition
Authorised specialist	An authorised specialist is a specialist that has been trained by the manufacturer, an authorised service dealer or a company assigned by the manufacturer.
Cook&Chill Kitchens	"Cook and Chill": Kitchens where warm food after being cooked is chilled as quickly as possible.
Cook&Serve Kitchens	"Cook and Serve": Kitchens where warm food is served immediately after being cooked or kept warm until it is consumed.
Specialist	A specialist is a person who can evaluate work assigned and can individually recognise any possible dangers due to professional training, specialist knowledge and experience as well as knowledge of the respective guidelines.
Gastronorm	Gastronorm is a measurement system applied worldwide, for instance, in food processing plants or large-scale kitchens. The use of standardised sizes makes it possible to exchange food pans. The basic size of the Gastronorm (GN) 1/1 is 12.8x20.9" (325x530mm). Items are available in different depths.
H1	Hygienic standard (NSF/USDA) for lubricants that are suitable for incidental and technically unavoidable contact with foodstuffs
HACCP	The HACCP concept is a preventive system that should ensure the safety of foods and consumers.
Control	Compare with certain conditions and/or characteristics such as damage, leaks, filling levels, heat.
LMHV	Regulation on the Hygiene of Foodstuffs Regulation on the requirements concerning hygiene when producing, handling and placing food on the market
Machine safety	The term of machine safety means all the measures used to avert injury to persons. The basis for this are national as well as EC-wide valid directives and laws for protecting users of technical devices and systems.
Passive layer	A non-metallic protective layer on a metallic material that prevents or slows down material corrosion.
Check	Compare with certain values such as weight, torque, content, temperature.
Qualified person, qualified staff	Qualified personnel are persons who due to their professional training, experience and instruction as well as their knowledge of the respective standards, guidelines, accident prevention regulations and operating conditions have been authorised by a person responsible for system safety to carry out required activities and can recognise and prevent any possible danger (definition of specialists according to IEC 364).
Schuko®	The abbreviation of the German term "Protective contact" that indicates a system of domestic plugs and sockets equipped with protective earthed contacts used in most of Europe.
Instructed persons	An instructed person is a person who has been instructed on the possible risks resulting from improper behaviour when carrying out the assigned task as well as on the necessary protective equipment and protective measures and trained for this task if necessary.

## 1.5 Orientation Guide

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### **The front**

"The front" means the side where the push bars are arranged. The operating staff stays at this side to move the cold food mobile bain marie.

### **The rear**

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

### **The right**

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

### **The left**

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




## 1.6 Notes on Use of Manual

### 1.6.1 Notes on the manual structure

This manual is structured in functional and task orientated chapters.

### 1.6.2 Notes and their illustrations used in the chapters

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

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



## 2 Safety Instructions

### 2.1 Introduction

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

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




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

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

### 2.2 Warning Symbols Used

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

The following symbols can be used:

	General hazardous area
	Cold surfaces
	Wear hand protection

### 2.3 Safety Instructions for Appliance Safety

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

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

- The appliance may only be operated as intended, when it is in perfect condition with regards to technical standards, with awareness of safety and hazards and in accordance with the operating instructions.
- All the operating and actuating elements must be in a perfect and functionally reliable condition with regards to technical standards.
- The appliance must be checked for external visible damage and defects whenever it is put into operation. In case of damages, inform immediately the competent bodies and switch off the cold food mobile bain marie.
- Modifications or retrofits of the equipment are only permitted in consultation with the manufacturer and on receipt of his written agreement.
- The appliance is provided exclusively for manual transport. Transport using any kind of devices is not permitted. Risk of injury and damage.
- Release both total brakes before commencing transporting. Moving the appliance with the total brakes locked can damage the chassis.

- Transport should only be undertaken over level floors. Moving the appliance over very uneven floors and stair steps can damage the chassis.
- Do not stop the cold food mobile bain marie by applying the total brakes. The total brakes are designed to be able to prevent the appliance from unintended moving. Do not stop the appliance on sloping floors. Secure the appliance against rolling away by applying both total brakes when stopping it.
- When approaching walls and moving round obstacles always pay attention to persons in the way. Risk of injury.
- When transporting the appliance, always hold both push bars with your hands. Never let go of the appliance while moving it.
- When transporting the appliance, do not move it faster than a walking pace. Heavily laden appliances are difficult to brake and steer. If necessary, ask for assistance when transporting the appliance.
- If the cold food mobile bain marie tips over due to outside influence or inattention, never catch it manually. Risk of injury.
- In the case of off-site transport in a vehicle such as a lorry, the appliances should be secured properly. The total brakes are not sufficient as a transport securing method.

## 2.4 Safety Instructions for Cold Storage Plates

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

## 2.5 Safety Instructions for Transport

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The following points are to be observed when transporting the cold food mobile bain marie:

- 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 cold food mobile bain marie .
- In no case put a defective appliance into operation and inform the supplier immediately.

## 2.6 Safety Instructions for Cleaning and Care

---

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

- For reasons of hygiene the cleaning instructions must be strictly observed.
- Do not clean the appliance with steam-jet or high-pressure cleaners.

## 2.7 Safety Instructions for Troubleshooting

---

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

- The local applicable Accident Prevention Regulations must be observed.
- Observe the valid product safety regulations when handling oils, greases and other chemical substances.
- Carry out all the checks and inspections of the appliance on a regular basis. Remedy immediately deficiencies, such as loose screw connections.
- Only authorised specialists may perform all repair work.
- Defective components should only be replaced with original parts.

## 3 Description and Technical Data

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### 3.1 Performance Description

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Cold food mobile bain maries are mobile appliances intended for cooling cold products in closed rooms.

They are used mainly for cold food distribution from flat Gastronorm containers at the food distribution belt. Cold food mobile bain maries are also suitable for cold components in Cook&Chill kitchens and for desserts like pudding and cold sweet soup in Cook&Serve kitchens.

The storage period of cold food is limited by the equipment. Higher ambient temperatures reduce and lower ambient temperatures increase the possible maximum storage period.

With the doors closed, the cold storage plates completely frozen and with an ambient temperature of 68°F (20°C), cold food mobile bain maries with passive cooling may only be operated for up to four hours. Cold storage plates have to be replaced regularly for longer cooling times.

### 3.2 Intended Use

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Cold food mobile bain maries are intended to accommodate and transport cold food in Gastronorm containers. Use of other loads is not permitted.

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

Cold food mobile bain maries are suitable for an ambient temperature of up to 77°F (25°C). For higher ambient temperatures a longer lead time is needed to cool the empty appliance. After the appliance has been pre-cooled, new cold storage plates have to be inserted to make sure that the stored products are kept properly.

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

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

### 3.3 Improper Use

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Cold food mobile bain maries are intended for cooling cold products. Warm meals should not be put into the appliance.

The permitted ambient temperature may not be exceeded.

The appliances should not be exposed to direct sunlight.

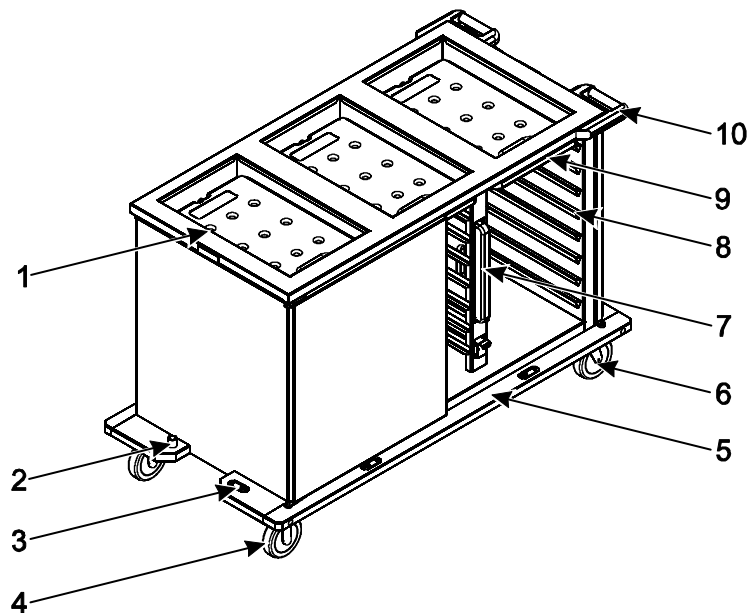
In no case may people sit down or stand on or in to the appliance.

Any other use, especially loading the cold food mobile bain marie with other loads as given, is not permitted.

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

## 3.4 Appliance Description

### 3.4.1 View of the appliance cold food mobile bain marie



**Figure 1** View of the appliance KSPA-3

- |   |                                   |    |  |
|---|-----------------------------------|----|--|
| 1 | Cut-out for gastronorm container  | 6  | Swivel caster with total brake               |
| 2 | Door retainer                     | 7  | Middle wall for receiving cold storage plate |
| 3 | Extension for drain plug          | 8  | Beads  |
| 4 | Swivel caster without total brake | 9  | Support for cold storage plate               |
| 5 | Peripheral frame                  | 10 | Push bar                                     |

### 3.4.2 Appliance Description

Cold food mobile bain maries are intended for receiving flat gastronorm containers. They are made of high quality stainless steel and are executed in strong self-supporting construction.

In the top plate of the appliance, there are two (KSPA-2) or three (KSPA-3) cut-outs for inserting one container GN 1/1-65 each. The cut-outs in the top plate are directly connected with the cabinet below. The cabinet compartments are suitable for storage of products in GN 1/1 containers or their subdivisions. All cabinet compartments are ideal for receiving GN 1/1-65 standard containers. They have seven pairs of insert rails at a distance of 0.04" (75 mm). The upper inserts are intended for receiving the cold storage plates.

The cabinets are separated from each other by one or two middle walls. One cold storage plate each is inserted vertically into the middle walls. Together with one transversely inserted plate per cabinet, the container suspended in the top plate and the GN containers in the lower part can be cooled equally.

The cabinet doors can be firmly fixed in either shut or opened condition by the door retainer. Double-walled wing doors with sealing ensure that the ambient heat does not get into the base construction.

Protection against collision is guaranteed by the lower peripheral frame on the trolley. Two ergonomically formed push bars with integrated bumper protect your hands against injuries.

Cold food mobile bain maries are equipped with four swivel casters, two of which have total brakes that prevent the appliance from moving. Push bars with integrated bumper protect your hands against injuries.

The cold storage plates are filled with cooling salt water (cooling brine). Nutritionally, plastic housings and coolant are totally harmless.

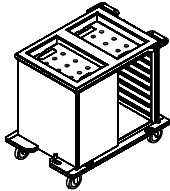
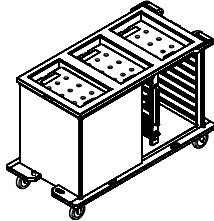
### 3.4.3 Optional accessories

The following parts can be applied as optional accessories for the cold food mobile bain marie:

- Gastronorm containers and bowls of various sizes
- Bars for wells, length 12.8" (325 mm), made of stainless steel
- Bars for wells, length 20.9" (530 mm), made of stainless steel
- Cold storage plate GN1/1, 20.9 x 12.8 x 1.2" (530 x 325 x 30 mm), plastic container with cooling brine, temperature phase transition from solid to liquid at 10.4°F (-12°C)
- Swivel casters made of stainless steel, Ø 4.92" (125 mm) with and without total brakes, plate attachment

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

## 3.5 Technical Data

	Dim.	KSPA-2	KSPA-3
			
Width	in (mm)	27.2" (690)	27.2" (691)
Depth	in (mm)	39.1" (992)	54.4" (1382)
Height	in (mm)	36.1" (916)	36.1" (917)
Own weight	lbs (kg)	143.3 (65)	224.9 (102)
Payload	lbs (kg)	396.8 (180)	595.2 (270)
Cut-outs in the top plate		for 2 GN1/1	for 3 GN1/1
Cupboard compartments		2	3
Number of cold storage plates		3	5
Inserts per cabinet		7 x –GN1/1-65	7 x –GN1/1-65
Capacity		14 containers GN 1/1-65 (cabinets) 2 containers GN 1/1-65 (cut-out in the top plate) 3 cold storage plates 20.8 x 12.8" (530 x 325 mm)	21 containers GN 1/1-65 (cabinets) 3 containers GN 1/1-65 (cut-out in the top plate) 5 cold storage plates 20.8 x 12.8" (530 x 325 mm)
Operating time (depending on the ambient temperature)		5 hours at approx. 59°F (15°C) 4 hours at approx. 68°F (20°C) 3 hours at approx. 77°F (25°C)	5 hours at approx. 59°F (15°C) 4 hours at approx. 68°F (20°C) 3 hours at approx. 77°F (25°C)
Caster diameter	in (mm)	4.92" (125)	4.92" (125)
Dimensions of cold storage plate	in (mm)	20.9 x 12.8 x 1.2" (530 x 325 x 30)	20.9 x 12.8 x 1.2" (530 x 325 x 30)
Mass of cold storage plate	lbs (kg)	9.9 (4.5)	9.9 (4.5)

	Dim.	KSPA-2	KSPA-3
Content of cold storage plate (cooling brine)	l	4	4
Freezing time of cold storage plate	h	24 (at -0.4°F [-18°C])	24 (at -0.4°F [-18°C])

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

3.6 Rating Plate

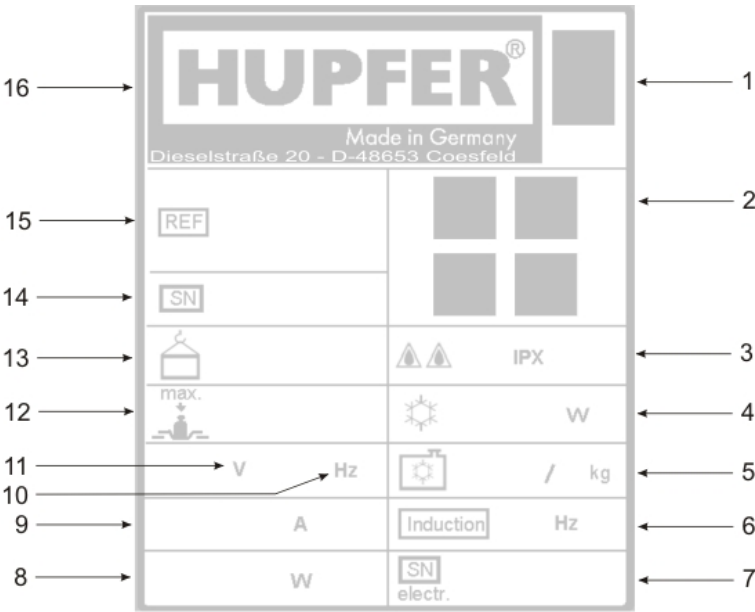


Figure 2 Rating plate

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

## 4 Transport, Putting into Operation and Decommissioning

### 4.1 Transport

#### ATTENTION



#### Appliance damages caused by improper transport

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

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

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

The cold food mobile bain marie is delivered in a fully assembled condition.

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

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

### 4.2 Putting into Operation

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

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

#### INFO

#### Disposal of packing material

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

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

The functioning of the total brakes must be checked before putting it into operation.



### 4.3 Storage and Recycling

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

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

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

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



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

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

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

## 5 Operation

### 5.1 Operation

<b>ATTENTION</b>	<b>Contamination by germs</b>
	<p>The appliance is not suitable for permanent, cooled storage of food. In the event of extended use or high ambient temperatures, the cooling effect of the cold storage plates must be checked regularly.</p> <p>Immediately replace the cold storage plates, if the cooling capacity decreases.</p>
<b>ATTENTION</b>	<b>Contamination by germs</b>
	<p>Microorganisms from the air may get into the GN containers and contaminate stored food.</p> <p>Always cover the food in GN containers with suitable lids immediately after the food has been prepared in order to avoid contamination with germs.</p>
<b>NOTE</b>	<b>Storage temperatures</b>
	<p>It is necessary to check and verify the compliance of the prescribed storage temperatures with appropriate measuring instruments (thermometers) before the distribution of meals.</p>

#### Preparing the appliance

- Cover the cut-outs in the top plate with Gastronorm containers.  
In this way, warm air cannot get from the outside into the interior and air humidity will not deposit as frost or ice on the cold storage plates.
- Insert the frozen cold storage plates into the appliance:  
Insert the cold storage plates transversely into the upper supports of the cabinets.  
Insert the cold storage plate vertically into the supports of the middle walls.
- Close and lock the doors of the cabinets.

<b>NOTE</b>	<b>Pre-cooling time</b>
	<p>With the cabinet doors closed, the cut-outs in the top plate covered and an ambient temperature of up to 77°F (25°C), the appliance will have the right temperature after approx. 30 minutes and can be loaded.</p>

#### Loading

Put the Gastronorm containers into the cut-outs in the top plate.

- GN 1/1 containers with a depth of up to 2.56" (65 mm) can be put into the cut-outs without any problems.
- When using GN 2/3, GN 1/2 and GN 1/3 containers, use support bars. It is not possible to insert smaller containers.
- When containers with a depth of more than 2.56" (65 mm) are used, the cold storage plates below the cut-outs in the top plate have to be inserted at a lower position. As a result, the total capacity decreases.
- The containers in the cut-outs in the top plate have to be covered until food is served in order to avoid contamination with germs and heating.

Put the Gastronorm containers into the cabinets.

- Up to six pairs of GN 1/1 containers fit into each cabinet.  
The cold storage plates are inserted into the uppermost pair of beads.
- GN 1/1 containers with a depth of up to 2.56" (65 mm) ensure optimal use of the cabinet.
- When using GN 2/3, GN 1/2 and GN 1/3 containers, use support bars. It is not possible to insert smaller containers.

### **Moving**

- Release the total brakes.
- Grip the cold food mobile bain marie by the push bars and move it to the destination.
- When you got to the destination, apply both total brakes and make sure they are locked and the appliance is secured against unintended movement.

### **Unloading**

- When replacing empty containers from the cut-outs in the top plate with full ones from the cabinets, only open the doors for a short time and relock them as quickly as possible to ensure that as little warm air as possible gets inside.

## **5.2 Measures at the End of Operation**

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### **Switching the cold food mobile bain marie off**

- Apply both total brakes, make sure they are locked and the appliance is secured against unintended movement.
- Remove the inserted Gastronorm containers.
- Remove the support bars if available.
- Cover the cut-outs in the top plate.
- Remove, clean and dry the cold storage plates.

## 6 Fault Detection and Troubleshooting

### 6.1 Notes on Troubleshooting

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

Service work should only be carried out by authorised specialists.

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

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

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

### 6.2 Fault and Action Table

Fault	Possible cause	Action
Cooling is not sufficient	Cabinet door is not closed properly	Close the cabinet door
	Cold storage plates slightly defrosted	Insert frozen cold storage plates
	Stored food too warm (temperature higher than 50°F [10°C])	Only insert food that has already been cooled
	Ambient temperature too high	Check the condition of the cold storage plates at short intervals and replace them, if necessary
	Defective seal	Replace seal
	Cold storage plate untight	Replace cold storage plate
	Cold storage plates with a lower freezing temperature have been inserted	Only use cold storage plates from <b>HUPFER®</b>
Running noise of swivel casters	Defective caster bearings	Replace the swivel casters
	Sticky surface of the casters	Clean the swivel casters with water

## 7 Cleaning and Care

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### 7.1 Hygiene Measures

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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.

### 7.2 Cleaning and Care

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If the cold food mobile bain marie is handled with care, cleaned and maintained on a regular basis, it does not require any additional care measures.

The cold food mobile bain marie should be cleaned regularly after every use and at the latest every 25 operating hours to ensure a hygienically perfect operation.

The middle walls can be loosened with a screwdriver and removed for cleaning purposes.

To clean thoroughly and quickly, wipe the interior and exterior of the cold food mobile bain marie with a dry cloth.

Use for cleaning a soft cleaning cloth or an uncoated sponge. Use degreasing liquid cleansers that are approved for food industry. Never use high-pressure cleaner, chloride-containing cleaning agents, abrasive cleaning powder or other dry cleaning agents, steel wool, steel sponges and/or sharp-edged items.

### 7.3 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 from stainless steel into contact with concentrated acids, seasonings, salts etc. for longer than is absolutely necessary. Acid fumes which generate during cleaning of tiles also promote the corrosion of "refined stainless steel".
- Avoid damaging the surface of the stainless steel, particularly by metals other than stainless steel.
- Residues of extraneous metals produce extremely small amounts of chemical elements which can cause corrosion. In any case, contact with iron and steel should be avoided because that leads to extraneous rust. If stainless steel comes into contact with iron (steel wool, steel particles from pipes, water containing iron), this can be a trigger for corrosion. Therefore, for mechanical cleaning use exclusively refined steel wool or brushes with natural, plastics or refined steel bristles. Steel wool or brushes with unalloyed steel lead to extraneous rust due to abrasion.

## 8 Spare Parts and Accessories

### 8.1 Introduction

Service work should only be carried out by authorised specialists.

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

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

Always give the order number and corresponding part number when ordering replacement parts. The order number is given on the rating plate of the cold food mobile bain marie.

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

### 8.2 Spare Parts and Accessories List

#### KSPA-2 | KSPA-3

Spare part, part number	Item designation	Type	Qty
91065561	Distance ring		2
91000408	Clip bearings	Plastic	2
0191010963	Push bar	Plastic, black	1
014000400	Fixed caster	Ø 125, incl. 4 nuts plastic	1
014000402	Swivel caster	Ø 125, incl. 4 nuts plastic	1
0163584	Cold storage plate	GN 1/1 -12°C, polyethylene white	1
91164200	Door	665x400x27 left, with seal, stainless steel	1
91164216	Door	665x400x45 right, with seal, stainless steel	1
91234464	Extension for drain plug	Plastic, black	2
91028247-1	Door hinge	Plastic, black	4
0132502H	Bars	Stainless steel, 325 x 16.5 mm	
0132522H	Bars	Stainless steel, 325 x 20.5 mm	
0132512H	Bars	Stainless steel, 530 mm x 23.5	