



G[®]-CUP Cupboard Trolleys E 27.. made of aluminium anodised





Make sure to read the operating instructions prior to initial use!

Always follow safety warnings! Please keep for future reference!

This documentation is not subject to change management!

Information



Dear customer,

GMÖHLING Transportgeräte GmbH welcomes you as a customer of our company and thanks you for choosing one of our quality products.

These operating instructions are an integral part of the technical documentation and are intended for users who are familiar with using and maintaining the cupboard trolley

The responsible personnel must ensure that the information contained in these operating instructions and in the accompanying documents have been read and understood.

The operating instructions must be kept at a known place that is easy to reach, and they must be consulted if there is the slightest doubt.

The manufacturer is not liable for damage to personnel, pets or property or to the machine itself arising from improper/unauthorised use or as a result of disregarding or ignoring the safety criteria contained in these operating instructions or by altering the machine or by using unsuitable spare parts.

The copyright for the operating instructions lies solely with

GMÖHLING Transportgeräte GmbH

Stadelner Hauptstr. 34

D-90765 Fürth

Germany

or its legal successor.

The content of the user information is the intellectual property of GMÖHLING Transportgeräte GmbH.

GMÖHLING Transportgeräte GmbH expressly reserves the right of ownership and copyright of the information in the user information.

Reprinting and reproduction, even in part, are permitted only with the written permission of GMÖHLING Transportgeräte GmbH.

Status: January - 2020

Table of Contents



Information about the document	6
Structure of the warnings	6
Signal words and signal colours	6
Symbols	7
Mandatory signs	7
Warnings	7
Prohibition signs	7
Fire safety signs	8
Rescue signs	8
Other signs	8
Text formatting and diagrams	9
Continuous text	9
Enumerations	9
Instructions	9
Product designation	10
Product designation	10
Manufacturer	10
Intended use	10
The product area of application	11
Service life of the product	11
Reasonably foreseeable misuse	11
Unforeseeable improper use / misuse	12
General information	12
Warranty and liability	12
Objectives of the operating instructions	12
Target groups of the operating instructions	13
Operating personnel	13
External technical personnel GMÖHLING Transportgeräte GmbH	13
Safety information	14
Obligations	14
Operator's obligations	15
Obligations of the personnel	16
Reference values for lifting and carrying frequencies	17
Dangers due to mechanical energy	18
Residual risk	18
Supplemental instructions	18
Design and function	19
Technical data	19
Identification plate of the product	20
An overview of the G®-CUP cupboard trolley series E 272	21
	Information about the document Structure of the warnings Signal words and signal colours Symbols Mandatory signs Warnings Prohibition signs Fire safety signs Rescue signs Other signs Continuous text Enumerations Instructions Product designation Product designation Product designation Manufacturer Intended use The product are of application Service life of the product. Reasonably foreseeable misuse Unforeseeable improper use / misuse General information Warranty and liability Objectives of the operating instructions Target groups of the operating instructions Operating personnel External technical personnel GMÖHLING Transportgeräte GmbH Safety information Obligations Operator's obligations Operator's obligations Obligations Obesign and function Technical data Identification plate of the product An overview of the G®-CUP cupboard trolley series E 272

Table of Contents



4.2.1	G®-CUP cupboard trolley – model E 2722	. 22
4.2.2	G®-CUP cupboard trolley G®-CUP- model E 2723	. 23
4.2.3	G®-CUP cupboard trolley G®-CUP – model E 272	. 23
4.2.4	G®-CUP Module cupboard trolley – model E 2732	. 25
4.3	Tasks of the operating personnel	. 26
4.4	Design and function of the safety devices	. 27
4.4.1	Castors	. 27
4.4.2	Central directional lock	. 27
4.5	Optional features	. 28
4.5.1	Cylinder lock	. 28
4.5.2	Chassis and tyres	. 28
4.5.3	Steering castors with central wheel lock	. 28
4.5.4	Trailer coupling and spring-loaded drawbar	. 29
4.5.5	Replaceable seals	. 30
4.5.6	Driverless transport systems FTS	. 30
5	Transport	. 31
5.1	Warning notices for transport	. 31
5.2	Transport procedure	. 31
6	Commissioning	. 32
6.1	Warning notices regarding commissioning	. 32
6.2	Recommended operating conditions	. 32
6.3	Unpacking	. 33
6.3.1	Disposing of the transport and storage packaging	. 33
6.4	Checking function before use	. 34
7	Operation	. 35
7.1	Warning notices for operation	. 35
7.2	Operating the G®-CUP Cupboard Trolley	. 36
7.2.1	Checking before use	. 36
7.3	Door lock	. 36
7.4	Using the wheel lock	. 37
7.5	Loading and unloading	. 39
7.5.1	Safe parking	. 39
7.5.2	Loading and unloading	. 40
7.6	Moving	. 40
7.6.1	Manoeuvring a corner or changing directions	. 42
7.6.1.1	Steering with 2 steering and 2 fixed castors	. 42
7.6.1.2	Steering with 4 steering castors	. 43
7.6.2	Braking	. 44
7.6.3	Folding shelves with folding grate	. 44
7.7	Faults during the operating sequence	. 45

Table of Contents



7.7.1	Fault elimination	45
8	Maintenance and service	46
8.1	Warning notices for maintenance and servicing	46
8.2	General information	47
8.3	Scheduled maintenance	47
8.3.1	Maintenance by operating personnel	47
8.3.2	Maintenance by external technical personnel	47
8.4	Maintenance instructions	48
8.4.1	Cleaning	48
8.4.2	Cleaning in an automatic washing system	48
8.4.3	Lubrication	49
8.4.4	Graphic symbols on the G®-CUP Cupboard Trolley	49
8.4.5	Maintenance lists	49
8.4.6	Maintenance skills of the operating personnel	50
8.5	Defective components	52
8.5.1	Disassembly	52
8.5.2	Recycling	52
8.5.3	Disposal	52
8.5.4	Spare parts	52
9	Decommissioning	53
9.1	Warning notices for decommissioning	53
9.2	Taking out of service	53
9.3	Relocating:	53
9.4	Storage	54
9.5	Disposal	54
10	Appendix	55
10.1	Index of tables	55
10.2	Index of figures	56



1.1 Structure of the warnings

The combination of a signal with an icon classifies the respective warning. The symbol can vary depending on the type of danger.

▲ THE WARNING IS PLACED UNDER A SIGNAL WORD WHICH INDICATES THE EXTENT OF THE DANGER.

The first line after the signal word describes the type and source of the potential danger.

The next section describes the consequences that occur if no measures are adopted to avert the danger.

The last paragraph describes the actions to take in order to avoid the danger.

1.2 Signal words and signal colours

The following signal words are based on DIN EN 82079-1 and ANSI Z 535.4 and are used in this documentation. The safety colours were taken from the ISO 3864-1 standard.

Signal word	Usage	Explanation
▲ DANGER	Warning	designates a hazard with a high level of risk, which, if not avoided, leads to death or severe injuries.
MARNING	Warning	designates a hazard with a moderate level of risk, which, if not avoided, may lead to death or severe injuries.
△ CAUTION	Warning	designates a hazard with a low level of risk, which, if not avoided, may lead to minor or moderate injuries.
NOTICE	Notice	indicates ease of operation and cross- references. It excludes danger of liability damages or risk of injuries.
SAFETY INSTRUCTION	Safety instruction	Refers to certain safety-related instructions or procedures.

Table 1 Signal words and signal colours



1.3 Symbols

Pictograms from the standard series ANSI Z535.4 and ISO 3864-2 are used in this document. These pictograms fulfil different purposes depending on their representation:

1.3.1 Mandatory signs

Symbol	Explanation	Symbol	Explanation
(3)	Follow the instructions		Wear safety shoes
0	Wear a safety helmet		Wear safety gloves

Table 2 Mandatory signs

1.3.2 Warnings

Symbol	Explanation	Symbol	Explanation
\triangle	General warning sign		Warning of explosive substances
	Warning of crushing on obstacles		Warning of crushing fingers and hands
	Warning risk of falling		Warning of crushing risk on castors
	Warning of suspended load		Warning risk of tripping

Table 3 Warning signs

1.3.3 Prohibition signs

Symbol	Explanation	Symbol	Explanation
0	General prohibition sign		Entering the area is prohibited
Entry prohibited for unauthorised personnel			Parking or storing objects is prohibited
	Do not grab		

Table 4 Prohibition signs



1.3.4 Fire safety signs

Symbol	Explanation	Explanation Symbol Explanation	
1 8	Fire extinguisher Means a fighting		Means and equipment for fire fighting
	Extinguishing hose	Fire alarm	
昌多	Fire ladder		Fire alarm telephone

Table 5 Fire safety symbols

1.3.5 Rescue signs

Symbol	Explanation	Symbol	Explanation
文	Emergency exit (left)	→	Arrow
Ż.	Emergency exit (right)	O	Automated external defibrillator (AED)
+	First aid	•	Stretcher
£ +	Emergency telephone		Emergency exit with escape ladder
3.K	Gathering place		Emergency exit

Table 6 Rescue symbols

1.3.6 Other signs

Symbol	Explanation	Symbol	Explanation
	Dispose of packing material according to regulations		Recycling

Table 7 Other symbols



1.4 Text formatting and diagrams

1.4.1 Continuous text

This documentation was created in Arial font. The continuous text has a font size of 10.

1.4.2 Enumerations

 Enumerations/lists are used to concisely summarise content. A dot at the beginning of the text identifies the enumeration.

1.4.3 Instructions

Procedural instructions guide you step by step to specific actions. Carry out the instructions in numerical order. The individual parts of a procedural instruction are:

Purpose of the operation

- Overview and prerequisites
- 1. The user is guided step by step

via an intermediate goal and

- 2. One or more additional steps to
- > the result.



2 Product designation

2.1 Product designation

Product designation: G®-CUP Cupboard Trolley E272,

hereinafter referred to in short as "product" or "trolley"

Country of origin: Germany

2.2 Manufacturer



GMÖHLING Transportgeräte GmbH Stadelner Hauptstr. 34 D-90765 Fürth Germany

E-mail: sales@gmoehling.com

Tel.: +49 911 – 7669-0 Fax: +49 911 – 7669-277



2.3 Intended use

The G®-CUP Cupboard Trolley is used:

- for transporting clean and soiled linen (supply and disposal), medication, consumables, food trays (food distribution) and sterile materials (surgical instruments, catheter) inside hospitals, senior citizen and nursing homes.
- for the in-house storage, transport and delivery to other locations
- Living animals or people must not be locked and transported in the trolleys!

The G®-CUP Cupboard Trolley is designed for a maximum load of 300 kg and speed of 5 km/h, which may not be exceeded. When moving the trolleys in a train using a towing unit or moving them manually, no objects may be placed on the roof and the doors must be closed and locked.

The G®-CUP Cupboard Trolley features two fixed castors at the front and two steering castors at the rear each with a total brake. Operators use their own strength to push the trolley in front of themselves and to slow it down.

Any other or otherwise expanded use of the trolley is considered to be usage not in the manner intended and thus improper. In this case, the safety and protective functions of the product may be impaired. GMÖHLING Transportgeräte GmbH is not liable for any damage arising from this.

Intended use also includes:

- compliance with all instructions in the operating instructions
- compliance with all warnings
- compliance with the maintenance intervals



2.3.1 The product area of application

The G®-CUP Cupboard Trolley is used inside buildings and closed rooms of hospitals, senior citizen and nursing homes. The trolley is used to transport items from one location to another.

2.3.2 Service life of the product

The service life of the product is 10 years and depends on the following factors, etc.:

- Ambient conditions of use
- Intensity of utilisation
- Compliance with the maintenance intervals specified by the manufacturer.
- Careful use
- Intended use
- Observe the instructions contained in these operating instructions

2.4 Reasonably foreseeable misuse

Reasonably foreseeable misuse which can cause harm to the operator, a third party or to the product can occur in all operating modes:

- Using the product contrary to its intended use
- Improper commissioning, improper operation and maintenance of the product
- Operating the product beyond the physical operating limits described in the section "Operating Conditions"
- Modifying, extending or converting the product without first consulting the company GMÖHLING Transportgeräte GmbH
- Operating the product contrary to the conditions specified in the operating instructions with regard to warnings, operation, service and maintenance
- Bypassing or disabling safety equipment or protective devices on the product
- Operating the product with obvious faults and / or defective safety equipment
- Failure to observe the specified pH values

⚠ WARNING



Risk of injury due to impermissible changes!

There may be dangers occurring if unauthorised modifications are made to the product and if spare parts of third party manufacturers (no original spare parts) are used.

Do not allow any unauthorised or other modifications to the product without prior approval from GMÖHLING Transportgeräte GmbH.



2.4.1 Unforeseeable improper use / misuse

Unforeseeable improper use / misuse may occur as a result of:

- cases of disaster
- impact of foreign bodies
- force majeure

2.5 General information

2.5.1 Warranty and liability

The "General Sales and Delivery Conditions" of GMÖHLING Transportgeräte GmbH apply. They are made available to the owner upon signing of the contract at the latest. Warranty and liability claims in case of personal injury or property damage are excluded if they are due to one or several of the following causes:

- Improper use of the product
- Improper commissioning, operation and maintenance of the product
- Disregarding the information in the operating instructions
- Unauthorised structural alteration of the product
- Inadequate implementation of the maintenance work prescribed
- Disasters caused by external influence or force majeure conditions

Read the operating instructions carefully before first starting up or using the product. The operating instructions should familiarise the user with the handling of the product and instruct the user in the details regarding the function and maintenance.

The operating instructions must be made accessible to the personnel at all times and must be kept ready at hand near the product. The instructions provided in the operating instructions on maintenance and operational safety must be observed and followed. For further questions that go beyond the scope of this operating manual, please contact GMÖHLING Transportgeräte GmbH at any time.

2.5.2 Objectives of the operating instructions

These operating instructions serve as support and contain all necessary instructions that must be observed and followed for general safety, transport, operation, maintenance, storage and disposal. These operating instructions with all warning notices (as well as all additional documents of the assemblies provided by external suppliers) must be:

- followed, read and understood by all persons working on the product; this is especially true of the warning notices
- easily available at all times to all persons and consulted if even the slightest doubt arises

Objectives:

- Prevent accidents
- Increase service life and reliability of the product
- Reducing the costs of production downtime



2.5.3 Target groups of the operating instructions

At different life cycle phases of the product, personnel with varied competences may come into contact with the product. This includes the following target groups:

Tasks	Operating personnel	External technical personnel
Transport	Х	X
Installation	Х	X
Commissioning	Х	X
Operation	Х	X
Fault diagnosis	Х	X
Maintenance	Х	X
Mechanical repair		X
Taking out of service	Х	Х

Table 8 Target groups

2.5.3.1 Operating personnel

A person who has precisely read the operating instructions and understood them in all points. The area of the operating personnel's tasks include operating tasks and the identification of possible dangers in case of improper behaviour and where necessary, the knowledge of the necessary protective equipment and safety measures.

Qualifications of the operating personnel who work independently with the system:

- Of legal age
- Physically and mentally suitable for this purpose

2.5.3.2 External technical personnel GMÖHLING Transportgeräte GmbH

The external technical personnel must be requested from the manufacturer GMÖHLING Transportgeräte GmbH or must perform work on the product that has been authorised by the manufacturer.

Qualifications of the external technical personnel who may independently perform work on the product:

- Of legal age, physically and mentally suitable for this purpose
- Several years of technical experience (at least two years):
 - Knowledge: several years of experience (at least two years) in the field of work or study applying the critical understanding of theories and principles and knowledge of the relevant standards
 - Skills: command of the subject as well as the innovative capability and ability to solve complex and unpredictable problems in a specialised field of work or study.
 - Competencies: special ability to assess assigned work and identify dangers
- Specially trained for the manufacturer's products and familiar with every life stage of the product
- Completes the phases of the transport up to the handover to the operator





⚠ WARNING

Risk of injury and causing material damage!

There are dangers posed by ignoring the operating manual and all safety instructions given there.

Read the operating instructions carefully before start-up. Meet and observe the required safety conditions. Observe the general warning notices as well as special warning notices in the other sections.

The product has been constructed according to state-of-the-art technology and recognised safety-related regulations. To prevent any risk to life and limb of the operator or third parties, or damage to the product, the product must only be used according to its intended purpose and in perfect operating condition in terms of safety. Bodily injuries and/or property damages resulting from non-compliance with the instructions provided in the operating manual are the responsibility of the product owner or the persons assigned by it.

3.1 Obligations



⚠ WARNING

Risk of injury by disregarding the safety symbols!

There is risk of injury by ignoring the warnings notices in the product area and in the operating instructions.

Comply with all warnings and safety notices in these operating instructions.

The following circumstances may increase the hazard potential of the product:

- Failure of important product functions
- Failure of specified service and maintenance methods
- Danger posed to personnel through mechanical influences
- Faults that may impair the safety during operation of the product

SAFETY INSTRUCTION If faults are identified that may impair the safety while operating the product, then operation must be stopped immediately. The faults identified must be rectified. The product may only be operated again after the identified faults are rectified and the product can be operated safely.



3.1.1 Operator's obligations

SAFETY INSTRUCTIONS All persons working in the area of producthave an obligation to contribute to safety and health protection at the workplace. They must be familiar with the use and conditions of deployment of the product.

The product must be in a safe condition and must be used to ensure safe operation.

Consequently, the operator is obliged to ensure that the following instructions are complied with:

- Ensure that the product is operated by authorised personnel only.
- Prohibit unsafe and dangerous working methods.
- Have personnel verify with a signature that they have read and understood the operating instructions.
- Ensure that a copy of the complete operating instructions is always readily available near the system for each operator.
- Check the operating instructions regularly for completeness and legibility.
- Pay attention to the safety instructions and hazard notices placed near the product and ensure that they are kept in a legible or recognisable condition.
- For activities with an increased risk of injury, require personnel to wear appropriate personal protective equipment (PSE) (e.g. safety shoes when moving and operating a fully loaded product).
- Require personnel to immediately report potentially occurring and identifiable safety deficiencies to their supervisor.

MARNING



Risk of injury due to disregarding the procedural instructions!

There are risks posed by unauthorised actions on the product.

Observe and follow all instructions and warning notices provided. Do not carry out any activities for which there is no authorization available. Contact the appropriate qualified personnel with any questions.

⚠ WARNING



Risk of injury due to insufficient qualifications of personnel!

There are risks for human beings and proper operation by deploying personnel who are not adequately qualified.

The product must only be operated by authorised personnel who are familiar with the operating instructions and can work according to these instructions. The operating company must regulate the personnel's areas of responsibility, competence and supervision accurately.

The personnel for the areas of responsibility mentioned in the Chapter "Target group of the operating manual" must have the corresponding qualification for this work (training, instruction). If necessary, this can also be done on behalf of the operating company by the manufacturer. Ignoring the instructions leads to warranty claims being rendered null and void.



3.1.2 Obligations of the personnel

SAFETY INSTRUCTIONS All persons working in the area of producthave an obligation to contribute to safety and health protection at the workplace.

⚠ WARNING



Risk of injury due to an improper condition of the product!

During product operation, faults or malfunctions may lead to hazards.

Check the proper condition of the safety equipment, the supply lines and the overall condition of the product at least once per shift. Secure the product against being put into operation inadvertently. Switch on the product only if the proper condition has been established and any damage or defects have been attended to and rectified.

SAFETY INSTRUCTION Immediately inform the supervisor if one of the points cited above occurs.

1

⚠ WARNING

Risk of injury due to unauthorised persons in the product area

There are risks posed by unauthorised personnel intervening in the running processes.

Only allow qualified personnel who have been specially trained and instructed to set up and use the product and to carry out maintenance work near the product.

SAFETY INSTRUCTIONS The personnel are obliged to contribute to the prevention of occupational accidents and their consequences of their personal conduct.



3.1.3 Reference values for lifting and carrying frequencies

Gender	Load weight in kg	Lifting, putting down, moving and holding	Carry up to a carrying distance of		
			5 to < 10 m	10 to < 30 m	≥ 30 m
	< 10		in general, with	out restriction	
	10 to < 15	up to 1000x / shift	up to 500x / shift	up to 250x/ shift	up to 100x/ shift
Men	15 to < 20	up to 250x/ shift	up to 100x/shift		up to 50x/ shift
	20 to < 25	up to 100x/ shift	up to 50x /shift		
	≥ 25	only in cor	njunction with spe	cial preventativ	e measures
	< 5		in general, with	out restriction	
nen	5 to < 10	up to 500x / shift	up to 500x / shift	up to 250x/ shift	up to 100x/ shift
Women	10 to < 15	up to 250x/ shift	up to 100x/shift		up to 50x/ shift
	≥ 15	only in cor	njunction with special preventative measures		e measures

Table 9 Orientation values for frequent lifting and carrying frequencies in Germany and Europe

1

⚠ CAUTION

Risk of injury due to failure to observe the table values

Exceeding the permissible loads, carrying distances and the duration for lifting, carrying, moving and holding can be damaging to health.

Pay attention to the tables on "Orientation values for lifting and carrying frequencies".

NOTICE: Observe the applicable local binding regulations on lifting and carrying frequencies for male and female personnel.

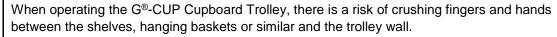


3.2 Dangers due to mechanical energy



⚠ WARNING

Risk of injuries due to crushing fingers and hands!



You can suffer cuts on your fingers and hands or break them.

Do not reach between the shelves, hanging baskets or similar and the trolley wall!

SAFETY INSTRUCTION Notify the operating personnel about the dangers due to mechanical energies and especially of the warning messages attached to the product.

3.3 Residual risk

Despite taking all precautions, there may still be residual risks that are not immediately apparent.

You can reduce the existing residual risks by observing and following the warnings and intended use of the product.

3.4 Supplemental instructions

The provisions of the accident prevention regulations also apply to all work on the product.

In addition, observe and follow the

- applicable, local and binding accident prevention regulations
- applicable, local and binding regulations at the place of use
- recognised technical regulations for safe and professional working methods
- existing local environmental protection regulations
- other applicable regulations

The employees must receive training concerning the dangers and the suitable protective measures at regular intervals - at least once a year.



4.1 Technical data

Product name: G®-CUP Cupboard Trolley made of alum	
Year of manufacture:	2020
Max. load:	300 kg
Max. speed:	5 km/h

Table 10 Technical data

Model	Internal dimensions in mm (L x W x H)	External dimensions in mm (L x W x H)	Room volume in l	Wheel diameter in mm
E 2721	1320 x 600 x 1220	1410 x 690 x 1596	970	200
E 2722	1130 x 550 x 1430	1220 x 640 x 1806	890	200
E 2723	1130 x 550 x 1030	1220 x 640 x 1406	640	200
E 2724	1130 x 520 x 1430	1220 x 610 x 1806	840	200
E 2725	750 x 550 x 1430	840 x 640 x 1806	590	200
E 2726	1255 x 600 x 1430	1345 x 690 x 1806	1080	200

Table 11 Technical data: Dimensions, room volume and wheel diameter

Model	Number of shelves	Number of compartments	Compartment height in mm	Weight in kg	Load capacity: in kg
E 2721	2	3	390	80	300
E 2722	2	3	460	77	300
E 2723	1	2	500	63	300
E 2724	2	3	460	75,5	300
E 2725	2	3	460	61	300
E 2726	2	3	460	84	300

Table 12 Technical data: Number of shelves, compartments, compartment height, weight, load capacity



Model	Internal dimensions in mm (L x W x H)	External dimensions in mm (L x W x H)	Wheel diameter in mm	Number of module compartments
E 2731	465 x 635 x 1167	555 x 725 x 1464	125	1
E 2732	900 x 635 x 1167	990 x 725 x 1543	200	2
E 2733	1330 x 635 x 1167	1420 x 725 x 1543	200	3

Table 13 Technical data: Dimensions, wheel diameter, number of module compartments

Model	Plastic rails (Pair)	Grid spacing Approx. in mm	Weight in kg	Load capacity: in kg
E 2731	9	124	46	100
E 2732	18	124	67	200
E 2733	27	124	82,5	300

Table 14 Technical data: Number of plastic rails, grid spacing, weight, load capacity

4.1.1 Identification plate of the product

The identification plate of the product is located below on the narrow trolley side:



Figure 1 Identification plate



4.2 An overview of the G[®]-CUP cupboard trolley series E 272



Figure 2 An overview of the G®-CUP cupboard trolley series E272

The G®-CUP cupboard trolleys made of aluminium with an anodised surface have the following features or standard equipment:

- Anodised surface
- Walls and aluminium profiles are interlocked by means of clinching, making them extremely stable
- Open cupboard side with an all-round profile frame
- Two extremely rigid hinged doors, 3.0 mm thick, can be rotated through 270 degrees
- Open doors are secured by magnets
- Easy to use, one-handed, central twist lock ensures safely locked doors, even during transport by truck
- Good noise insulation and dust protection due to the all-round EPDM seal integrated onto the doors as well as the base and top profile
- Smooth interior with no indentations for easy handling and cleaning
- Model E 2721, E 2722, E 2723 and E 2726 with ergonomic push/pull handles anodised on each short side
- Model E 2725, E 2731, E 2732 and E 2733 with handles anodised on each short side
- All-round, abrasion-resistant, blue PVC bumper on the top and lower rim of the trolley
- Removable shelves (each shelf can be loaded up to 100 kg equally distributed) or internal design completely removable
- DIN A4 document frame on the inside of the door and DIN A7 on the short side of the trolley
- Torsion-resistant trolley undercarriage due to the BiTubAl®system
- Wheel arrangement B: 2 swivel castors with brakes and 2 fixed castors,
 Galvanised steel wheel housing, Supratech wheels, 200 mm wheel, polypropylene wheel centre, thermoplastic rubber tread, non-marking, precision ball bearings

DANGER



Risk of suffocation and falling with fatalities!

If personnel are locked in the unit, there is a risk of suffocation and when transporting personnel, there is a risk of falling, both of which may lead to fatalities.



Locking personnel in the unit or transporting people as well as animals in or on the trolley is prohibited!



4.2.1 G®-CUP cupboard trolley – model E 2722



- 1 Plastic deflector frame
- 2 Screw cap
- 3 Fixed castors

- 4 Steering castors with wheel lock
- 5 Magnet for holding the doors
- 6 Push/pull handle

Figure 3 General view of the model E 2722





Figure 4 Screw cap closed





Figure 5 Screw cap open



4.2.2 G®-CUP cupboard trolley – model E 2723



- Plastic deflector frame
- 2 Sign frame
- 3 Removable shelves

- 4 Fixed castors
- 5 Steering castors with wheel lock

Figure 6 Model E 2723, open

4.2.3 G®-CUP cupboard trolley – model E 272.



Figure 7 Doors open with folded shelves



Figure 8 Variable potential use





Figure 9 Doors open, design with shelves and mesh shelves



Figure 10 Details: Folding mechanism



Figure 11 Details: Magnet for keeping the doors open during loading and unloading



Figure 12 Details: Clip for keeping the doors open in the washing plant



4.2.4 G[®]-CUP Module cupboard trolley – model E 2732

Assembly rails can be mounted at different heights in the module cupboard trolley model E 2731 (single row), E 2732 (two rows) and E 2733 (three rows). The different grid spacing enables the use of module baskets of the ISO standard 400 x 600 mm. The height can be adjusted by changing the assembly rails for the heights 50, 100 and 200 mm.



Figure 13 Module cupboard trolley model E 2732

- 1 Assembly rails
- Wire module basket, 100 mm high
- 3 Module basket, 100 mm high
- 4 Module basket, 200 mm high



Figure 14 Details of assembly rail



Figure 15 Wire module basket, 200 mm



If necessary, the vertical brackets for the assembly rails can be removed by opening the screw connections on the trolley roof. The assembly rails are suspended in this bracket. The installation is explained in the following pictures.



Figure 16 Installing the vertical bracket for the trolley roof



Figure 17 The assembly rails are suspended in the vertical bracket

4.3 Tasks of the operating personnel

The operating personnel must perform the following tasks during operation to ensure trouble-free production:

- Loading and unloading the G[®]-CUP Cupboard Trolley
- Moving the G®-CUP Cupboard Trolley
- Retooling the G®-CUP Cupboard Trolley
- Identify faults and notify specialised personnel as needed
- After a fault or retooling, starting the G®-CUP Cupboard Trolley in accordance with the instructions of the specialised personnel
- Performance of service and maintenance measures according to the operator's specifications



4.4 Design and function of the safety devices

4.4.1 Castors

The G®-CUP Cupboard Trolley is equipped with a total of four castors.

It is possible to use a combination of castors including 2 fixed castors and 2 steering castors with wheel locks. 4 steering castors can also be used.



Figure 18 Fixed castor



Figure 19 Steering castor with wheel lock

4.4.2 Central directional lock

With the arrangement of 4 steering castors, the G®-CUP Cupboard Trolley optionally features a jointly operated directional lock for the 2 rear steering castors.



Figure 20 Central directional lock



4.5 Optional features

4.5.1 Cylinder lock

The G®-CUP Cupboard Trolley can be secured with a cylinder lock. The respective key position is marked on the right next to the lock. When opening and closing the door with a screw cap, the key position must be at "open". Make sure not to forcefully open the lock. Since the lock can otherwise be damaged.



Figure 21 Cylinder lock, including two keys

4.5.2 Chassis and tyres

The wheel diameters, tyres and castor arrangement can be modified according to the application requirements.



Figure 22 Chassis and tyres

4.5.3 Steering castors with central wheel lock

When the central directional lock is operated, the two steering castors and the direction are fixed.



Figure 23 Steering castors with central wheel lock



4.5.4 Trailer coupling and spring-loaded drawbar

The G®-CUP Cupboard Trolley optionally features a spring-loaded drawbar that can be swung up. The drawbar automatically folds up if it is not fastened to the coupling of another trolley. The coupling with the automatic safety mechanism prevents unintentional decoupling.

To decouple the unit, the locking plate must be pressed and held down while the drawbar is pressed down to unlock it. Afterwards, slightly move the two trolleys apart and slowly move the drawbar up until the vertical setting is reached.



Figure 24 Coupling pin

A maximum of 3 trolleys can be coupled in a trolley train.



⚠ WARNING

Risk of injury due to falling trolley

There is risk of trolleys falling if a train consisting of more than 3 trolleys is assembled. The trolleys can fall on you or other personnel, causing serious injuries and property damage.

Never assemble a train with more than 3 trolleys.



Figure 25 Coupled drawbar



Figure 26 Drawbar that can be swung up



4.5.5 Replaceable seals

All cabinet models are equipped with replaceable sealing profiles.



Figure 27 Sealing profile



Figure 28 Sealing profile on the door

4.5.6 Driverless transport systems FTS

Driverless systems allow for the automation and optimisation of logistic processes, not least in clinics. Due to its basic design, the $G^{\text{@}}$ -CUP Cupboard Trolley is ideally suited for such requirements and can be adjusted and manufactured for various driverless system without significant additional expenditure.



Figure 29 Deploying driverless transport systems FTS



5 Transport

5.1 Warning notices for transport



A DANGER

Danger to life due to falling loads!



There are risks caused by human misconduct and inadequately secured loads.

Allow only those individuals who have been specially trained to perform transportation work. Never step below raised loads. Secure the load against changing its position.

For in-house trolley transport, use a forklift or another industrial truck, whose lifting capacity is equivalent to the weight of the trolley components. Place non-slip rubber mats on the forks of lift trucks so that the trolley cannot slip off. During transport, pay attention to the position of the centre of gravity of the machine.

While transporting the cupboard trolley in a truck, the brake of the castors **should not** be locked. Secure the trolley for transport by lorry on the loading surfaces by suitable means, whereby chafing points should be avoided.

Observe and follow the matching values for lifting and carrying trolley components.

⚠ WARNING



Risk of injury due to unsecured transport routes!

There is a risk of falling when transporting the trolley.

Arrange for proper illumination of the routes, ramps and steps over which loads are moved. Remove obstacles and stumbling points.

5.2 Transport procedure

The trolley must be moved with suitable unloading aids (crane / forklift). Suitable cables, chains or belts according to the load/weight of the trolley must be used for unloading or loading.

The following points must be observed and followed while transporting / unloading the trolley:

- Take the centre of gravity of the trolley into account.
- Do not connect the trolley to other trolleys (do not form a train).
- When stopping, make sure the trolley is on an even surface and remains firmly in place.
- Do not transport the trolley on automatic conveying equipment.
- Do not ride escalators with the trolley.
- Only use a crane/forklift to transport the trolley.

⚠ WARNING Observe the load carrying capacity of the crane / forklift.

- Check the slings for signs of damage.
- Check the supplied parts for completeness, damage or any other abnormalities.
- Observe the applicable safety and accident prevention regulations during the transport.



6 Commissioning

6.1 Warning notices regarding commissioning



⚠ WARNING

Risk of injury due to mechanical energies!

There are risks posed for the operating personnel and qualified personnel by mechanical dangers, e.g. crushing, getting pulled in and getting caught.

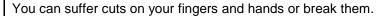
You can suffer cuts on your fingers and hands or break them.

Do not reach between the shelves, hanging baskets or similar and the trolley wall!



⚠ WARNING Risk of injuries due to crushing fingers and hands!

When operating the G®-CUP Cupboard Trolley, there is a risk of crushing fingers and hands between the shelves, hanging baskets or similar and the trolley wall.



Do not reach between the shelves, hanging baskets or similar and the trolley wall!



⚠ CAUTION

Risk of crushing on the castors and moving wheels!

When cleaning, there is a risk of crushing fingers and hands on moving parts.

Fingers and/or hands may be injured!

Do not reach between the moving parts of the castors and the cart and steerable castors.

6.2 Recommended operating conditions

Physical operating conditions			
Ambient temperature:	Approx. $+5$ °C to $+40$ °C = 41 °F to 104 °F		
Humidity:	Approx. 40% to 60%		
Special conditions:	Only use in enclosed rooms and outside areas protected from the weather		

Table 15 Operating conditions



6.3 Unpacking



⚠ CAUTION

The G®-CUP Cupboard Trolley is supplied ready to roll!

Do not leave the trolley unintended.

Only place the trolley on even horizontal surfaces. Otherwise, the trolley can roll away and cause property damage.

Notify the delivery vehicle driver before he unloads the product! Make sure that the delivery vehicle is on a horizontal surface before the unloading is started.

Secure the trolley with the wheel lock of the steering castors in order to park it temporarily.

Unpacking the G®-CUP Cupboard Trolley

Proceed with the necessary care and attention when unpacking trolley components. Check for external damages (also on the packaging) immediately on receipt of the goods. Any damage must be noted on the consignment note during the handover. Do not confirm error-free receipt of the goods if you determine damage. We cannot accept subsequent claims.

How to unpack the trolley and prepare it for use:

- You need a knife and/or a pair of side cutters.
- Wear safety gloves against cut injuries.
- 1. Prepare a sufficiently large, weight-bearing, even and horizontal surface.
- 2. Place the trolley on its castors.
- 3. Secure the trolley against rolling away using the wheel lock of the steering castors.
- 4. Put on gloves.
- 5. Open the shipping packaging using the knife and/or side cutters. Carefully remove all foil, straps and other packaging materials. Carefully work with the tools. Do not damage the product. Do not scratch the product surfaces. DANGER The packaging foils must be kept away from children. There is a risk of suffocating! Dispose of all the packaging material immediately after completely unpacking it.
- → After removing all the packaging material, the trolley can be fully rolled and steered. Observe and follow all safety information and warnings during use. Only use the trolley after you have successfully inspected and commissioned it.

6.3.1 Disposing of the transport and storage packaging



NOTICE: The transport and storage packaging must be disposed of according to the local disposal regulations and the procedures provided by the environmental laws of the operating company's country.

NOTICE: The trolley must be tied down for loading on a truck or train. The wheel locks, however, must remain released. The braking system will otherwise be damaged and the tyres will flatten when the trolleys slide.

Commissioning



6.4 Checking function before use

The following functions and characteristics must be checked / tested before using the trolley:

- Checking the trolley before use is for your safety.
- 1. Check the trolley for loose components (e.g. screws, nuts). Do not use a trolley with loose components.
- 2. Check the trolley for damage. Do not use the trolley if it is defective.
- 3. Check whether all castors can move freely.
- 4. Check whether the running surfaces of the castors are intact and are securely attached to the wheel disc.
- → If the trolley is not damaged and all castors and the wheels rotate freely, you can use the trolley.



7 Operation

7.1 Warning notices for operation



DANGER

Risk of suffocation and falling with fatalities!



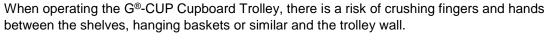
If personnel are locked in the unit, there is a risk of suffocation and when transporting personnel, there is a risk of falling, both of which may lead to fatalities.

Locking personnel in the unit or transporting people as well as animals in or on the trolley is prohibited!





Risk of injuries due to crushing fingers and hands!



You can suffer cuts on your fingers and hands or break them.

Do not reach between the shelves, hanging baskets or similar and the trolley wall!

<u>^</u>

⚠ WARNING

Risk of injury caused by intervention of unauthorised individuals!

There is enhanced risk of injury by wrong operation if unauthorised individuals work on the trolley. GMÖHLING Transportgeräte GmbH shall not be liable for any damages and their consequences arising from this.

The trolley should be only operated by authorised and trained operating personnel. They must have read the operating instructions of the trolley, understood their contents and be able to work accordingly.

NOTICE: Anodised surfaces may not be cleaned with acidic or alkaline cleaning agents - pH value less than 5 (acidic) or greater than 8.5 (alkaline)! The anodised coating is otherwise worn off.



7.2 Operating the G®-CUP Cupboard Trolley

7.2.1 Checking before use

Checking the trolley before use is for your safety.

- Check the trolley for damage. Do not use the trolley if it is defective.
- Check whether all castors can move freely.
- Check whether the running surfaces of the castors are intact and are securely attached to the wheel disc.
- Actuate the wheel locks of the steering castors. The castors must be locked. Make sure that this is the case.
- Release the wheel lock of the steering castors if you would like to move the trolley.

If the trolley is undamaged, all castors and the wheels turn/rotate freely and the wheel locks are functioning properly, you can use the trolley.

7.3 Door lock

The user-friendly, centrally operated door lock on the right door locks both doors. After the left door is closed, the right door is closed and overlaps the left door. By turning the door handle in a controlled movement, the top and bottom thrust plates roll down, both doors are automatically pressed against the door frame and on the door seals until the lock finally audibly locks into place. The contact pressure of the doors against the seals is delivery adjusted to a strong setting to achieve a long-lasting seal.

Make sure the lock audibly locks into place so that the doors do not accidentally open and thus prevent any of the trolley contents from falling out when transporting the trolley. When opening the doors, the door should be pressed against the trolley to make them easier to lock.



7.4 Using the wheel lock

The trolley is equipped with a foot-operated wheel lock on the rear steering castor.

⚠ CAUTION



Risk of cutting!

If you attempt to operate the wheel locks with bare feet or open-toed shoes (e.g. sandals), you could slip off the wheel lock.

You could cut yourself on the edge of the locking lever!

Always wear closed-toed shoes when using the trolley.

Blocking the wheel locks

- The wheel locks have two positions: The castor can be moved freely if the brake lever faces up. The castor is blocked if the brake lever faces down.
- 1. Securely hold the trolley with two hands on the push handle.
- 2. The wheel locks are operated via a brake lever. Place the top of your foot on the lever.
- 3. Kick the wheel lock lever down until you notice a considerable resistance.
- 4. Repeat steps with the other wheel brake.
- → The trolley is prevented from rolling.

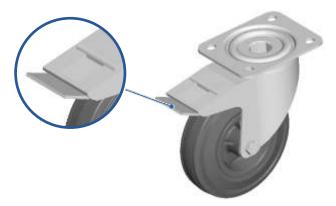


Figure 30 Wheel lock

Operation



NOTICE: To release the brake, the smaller raised wheel lock lever must be kicked down with your foot. This releases the brake.



Figure 31 Releasing the wheel lock



7.5 Loading and unloading

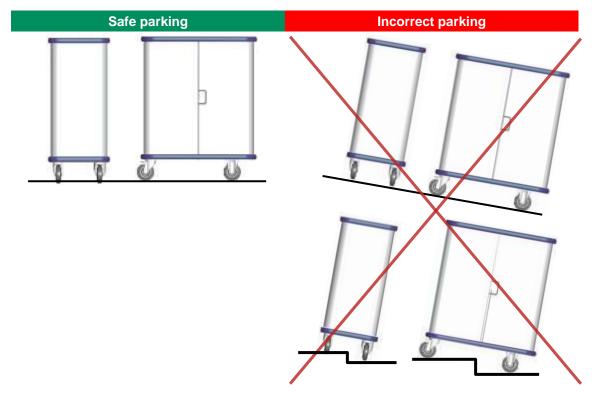
7.5.1 Safe parking

NOTICE: Only park the trolley on an even horizontal surface. The trolley is not automatically blocked. It will move on its own on uneven or inclines surfaces if you release it without the wheel locks applied.

How to safely park the trolley:

- 1. Park the trolley so that you are not hindered during loading and unloading and it is easy to access.
- 2. Block the steering castors with the wheel locks.
- → The trolley can now be loaded or unloaded.

NOTICE: The model displayed here provides an example for all other G®-CUP Cupboard Trolley models listed in these operating instructions!





7.5.2 Loading and unloading

Before unloading, you have to perform the Safe parking procedure! (See page 39).

SAFETY INSTRUCTIONS:

Loading

- Loading must be performed with caution and care.
- Place smaller objects on larger ones, not vice versa.
- Make sure that no objects protrude over the trolley edges.
- Only stack objects so high that they are always securely positioned together in the trolley and only as high as the trolley sides.
- Only load the trolley as full as indicated by the maximum load (300 kg).

Unloading

- Only park the trolley on an even horizontal, anti-slip surface.
- Make sure there is sufficient space so that you can move safely and stand securely in place.
- Unloading must be performed with caution and care.
- Always work cautiously and with due care.

7.6 Moving

The handle consists of anodised aluminium flat material combined with a moving, folding handle. To pull the trolley, use the folding handle in the middle to avoid crushing your hands.

The following figures display the handle in the pushing or pulling position



Figure 32 Handle in pushing position



Figure 33 Handle in pulling position

Risk of crushing on the handle!

When pushing and pulling the G®-CUP Cupboard Trolley, there is a risk of crushing fingers and hands between the pull/push handle and the trolley wall.

MARNING



You can crush or brake your fingers and hands.

Push and pull the trolley as displayed in Figure 32 and Figure 33.

Operation





⚠ WARNING

Risk of injury due to the weight of the load!



You must be able to brake the weight of the trolley with its load with your physical strength. You can lose control if the weight and the speed are too high.

Overestimating your own capabilities poses a danger of injury for yourself and third parties!

Always only load the trolley so that you can control it at all times. During use, always wear antislip safety shoes

SAFETY INSTRUCTIONS:

- Do not run with the trolley. Only move it at a walking pace.
- Please remember that: You need strength to stop a moving trolley again.
- Move the trolley cautiously and always securely hold the trolley with two hands.
- If necessary, have a second person help you.
- Never move the trolley on slippery inclined surfaces.
- Never use the trolley on an escalator.
- Before manoeuvring curves or changing directions, always slow down in a timely manner.
- Do not let yourself become distracted when moving the trolley.
- Never use the trolley to open doors or move obstacles to the side. Have someone help you
 open doors or move obstacles out of the way.



7.6.1 Manoeuvring a corner or changing directions

7.6.1.1 Steering with 2 steering and 2 fixed castors

If necessary, slow down if you would like to manoeuvre a corner or change directions. Always keep in mind that the rear castors are steered. The trolley steers differently than a car, for example.

- Using your arms, press the handle to the right to change direction to the left.
- Using your arms, press the handle to the left to change direction to the right.
- 1. Follow the rear part of the trolley until the trolley faces the desired direction.
- 2. Move in the middle behind the trolley again and stop pushing to one side. Instead, only push the trolley forward.
- → The trolley now moves in the direction you selected.

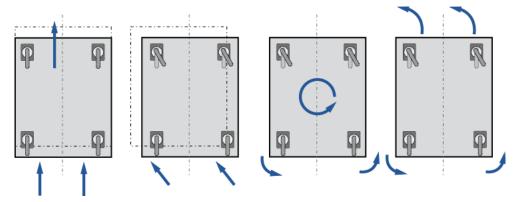


Figure 34 Steering behaviour with 2 steering castors



7.6.1.2 Steering with 4 steering castors

If necessary, slow down if you would like to manoeuvre a corner or change directions. Always be mindful that all castors are steered. The trolley steers differently than a car, for example.

- Pushing the trolley straight ahead: To push the trolley straight ahead, you have to securely hold the trolley and push it forward evenly on both sides. We recommend holding the trolley on the corners so that you can maintain the direction.
- Pushing the trolley at an angle: To push the trolley at an angle, you have to push the trolley evenly on both corners in the desired direction.
- Turning: To turn the trolley around its axis, you have to press the trolley on the left OR right side. Do NOT push it.
- Moving around a corner: If you would like to move the trolley around a corner, press the trolley on the side in the desired direction while moving forward. Press on the left side to move around a right corner and press on the right side to move around a left corner.
- 1. Follow the rear part of the trolley until the trolley faces the desired direction.
- 2. Move in the middle behind the trolley again and stop pushing to one side. Instead, only push the trolley forward.
- The trolley now moves in the direction you selected.

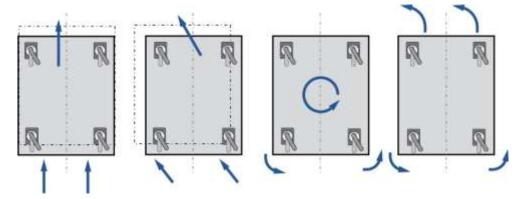


Figure 35 Steering behaviour with 4 steering castors



7.6.2 Braking



⚠ WARNING

The wheel locks are not used to stop a rolling trolley!

The wheel locks cannot be used while the trolley is moving. If you do, however, attempt to do so, the trolley may run over your feet.

It may result in serious foot injuries!

Only stop the trolley with your hands.

How to stop a moving trolley again:

- 1. Lightly pull the trolley towards yourself with two hands and slow down your steps.
- 2. Slow down your steps until you stop.
- → The trolley is stopped.

SAFETY INSTRUCTION Do not let yourself be pulled by a rolling trolley and do not drag your feet across the floor. Always maintain control of the trolley. Keep the total weight of a loaded trolley in mind when braking.

7.6.3 Folding shelves with folding grate

- When folding it down, the shelf must be lifted at the rear from below, held and then pulled out by approx. 100 mm.
- While securely holding the shelves with both hands, you swing the rear edge past the rear supports down into the vertical position.
- Before swinging the folding grate, the lock must be released and then the grate can be swung up.
- In its vertical position, the grate is easily raised to move it over the supports on both sides.
- The secure support must be checked on both sides.
- Proceed in reverse order to convert the grate to use the shelf. Lightly lift the grate and carefully swing it down. Make sure to hold the grate until it is in its suspended position to prevent damage to the system and any risk of injury.
- While securely holding the shelves with both hands, you swing the rear edge back up past the rear supports into the horizontal position and carefully place the shelf on the supports at the rear.



Figure 36 Folding grate



Figure 37 Details of the folding grate

Operation



7.7 Faults during the operating sequence

Procedure in case of a fault:

- Inform qualified personnel immediately if any faults occur!
- Attach a clearly visible "OUT OF SERVICE" sign on the trolley.
- Please contact the manufacturer's customer service department if faults occur that cannot be rectified without additional assistance!

7.7.1 Fault elimination



⚠ WARNING

Risk of injury due to unauthorised persons at the trolley!

There is danger if faults are eliminated by unauthorised personnel.

Allow faults to be attended to and eliminated only by qualified personnel who are trained specifically on dealing with the controller.



NOTICE: Unauthorised modifications and alterations to the trolley are prohibited. Only use those parts that have been approved by the manufacturer.

8.1 Warning notices for maintenance and servicing



DANGER

Risk of explosion caused by flammable cleaning agents!

There is a risk of explosion when using cleaning solvent or other flammable cleaning agents. Petroleum ether is highly flammable, can become electrostatically charged and may generate an explosive gas-air mixture. There is a risk of very serious injuries!

Never use cleaning solvent for cleaning.

SAFETY INSTRUCTION Observe the cleaning instructions and do not blow off cleaning agent using compressed air. This can create an explosive mixture.



▲ WARNING

Risk of injuries due to crushing fingers and hands!



When operating the G®-CUP Cupboard Trolley, there is a risk of crushing fingers and hands between the shelves, hanging baskets or similar and the trolley wall.

You can suffer cuts on your fingers and hands or break them.

Do not reach between the shelves, hanging baskets or similar and the trolley wall!



⚠ WARNING

Risk of injury posed by ignoring the manufacturer's specifications!

The functioning of the trolley can be impaired due to disregard of the manufacturer's cleaning instructions.

Maintain all environmental regulations while cleaning.



⚠ CAUTION

Risk of crushing on the castors!

When cleaning, there is a risk of crushing fingers and hands on moving parts.

Fingers or hands may be injured!

Do not grab between the moving parts of the castors.



8.2 General information

- Follow the general accident prevention regulations and the regulations of the VDE (German Association for Electrical, Electronic and Information Technologies).
- Replace defective trolley components as soon as possible.
- Inform operating and supervising personnel about maintenance or upkeep work prior to commencing.
- Use only such tools that are in perfect condition.
- Keep suitable containers ready for small parts that may have to be removed.
- Only use original spare parts that are approved by the manufacturer.
- Pay attention to all notices on trolley components, e.g., identification plates and arrows indicating the direction of rotation, etc.
- Tighten screw connections that have been loosened after doing maintenance and servicing work
- Perform a functional test (test run) after maintenance or repair work.
- Remove any used tools, screws, aids or other objects from the operational area of the trolley.
- Make sure to use extension cables that have a maximum length of 20 m with a drum and a maximum length of 10 m without a drum.

8.3 Scheduled maintenance

- Carry out prescribed adjustment, maintenance, and inspection work according to the schedule.
- Inform the operating personnel before starting maintenance work.

8.3.1 Maintenance by operating personnel

Specific maintenance tasks can be performed by operating personnel, if they have received instructions on how to do it. It must be documented in writing, which tasks can be carried out by the machine operators and when the competent specialist must be notified or requested.

8.3.2 Maintenance by external technical personnel

- Have maintenance work carried out by external technical personnel.
- Make sure that while repairing or replacing parts, work is done in accordance with the installation and operating instructions of the manufacturer of the component concerned or the respective spare part.



8.4 Maintenance instructions

8.4.1 Cleaning

- Please only use cloths, hand brushes or vacuum cleaners when cleaning.
- Remove all cleaning aids after performing cleaning work.
- Check the functionality of the cleaned area after cleaning.

NOTICE: Anodised surfaces may not be cleaned with acidic or alkaline cleaning agents - pH value less than 5 (acidic) or greater than 8.5 (alkaline)! The anodised coating is otherwise worn off. For cleaning and servicing, only use cleaning agents that are recommended by the German Working Group for Bed frame and Cart Decontamination Systems (AK-BWA) (https://www.gmoehling.com/fileadmin/user_upload/PDF/Cart_Decontamination_Systems_AK-BWA_pdf)

8.4.2 Cleaning in an automatic washing system

The G®-CUP cupboard trolleys are made of anodised aluminium. This protective coating created through electrical oxidation on the aluminium surface is resistant against common environmental influences. The protective coating is, however, damaged due to mechanical damage or alkaline or acidic cleaning agents.



Figure 38 Automatic washing system

The recommended cleaning agents must be used for cleaning and maintaining the cabinet surfaces. The material properties of anodised aluminium require the cleaning and disinfection processes to be carried out with cleaning agents in the neutral pH value range.

Soft water, which has been made from raw water during a softening process, is frequently used in an automatic decontamination system. When rinsing at high temperatures in particular, this soft water with an alkaline pH value has an erosive and thus destructive effect on anodised aluminium surfaces. To avoid this damage, the treatment and cleaning agents must have a neutral pH value.

To protect the surfaces, neutral demineralised water should be used for rinsing. Temperatures over 95°C as well as long trying cycles over 15 minutes must be avoided.

After the trolley has been removed from the decontamination system, you have to provide a sufficient subsequent drying time to dissipate the residual heat and moisture. Prior to commissioning our cupboard trolleys in your automatic washing system, you should always contact the manufacturer of the treatment and cleaning agents as well as perform a compatibility test with the water quality used in the system.



8.4.3 Lubrication

Do not perform any lubrication work on the G®-CUP Cupboard Trolley or its fixed and steering castors. The trolley is equipped with maintenance-free castors and bearings and does not require oil or grease.

NOTICE: Oiling or greasing the castors and bearings can damage the trolley. Dirt particles can accumulate in the bearings. Do not oil or lubricate the bearings.

8.4.4 Graphic symbols on the G[®]-CUP Cupboard Trolley

To provide important information and warnings to operating personnel, standardised safety signs in accordance with standards ANSI Z535.4 and ISO 3864-2 are used as graphical symbols. They must:

- easily recognisable for all persons
- kept in a recognisable/legible condition and
- renewed or replace when necessary.

This requires regular inspections by the operating company to check the condition of the warnings and safety signs and that they are installed/attached correctly.

The requirements imposed on personnel and the technical qualifications required for operation are presented in the 2.5.3 Target groups of the operating instructions chapter on page 12.

8.4.5 Maintenance lists

Perform maintenance work that is not listed and described in the maintenance documentation (this includes, among others, the disassembly and assembly of drive and safety components) only after consultation with the manufacturer.

Document the performance of all the prescribed maintenance work on the trolley.

The following maintenance lists contain:

- List for the maintenance interval: before each use (operating personnel)
- List for maintenance interval: daily (operating personnel)
- List for maintenance interval: weekly (operating personnel)

NOTICE: The maintenance instructions specified below must be understood as recommendations by the manufacturer. The company operating the trolley is obligated to document maintenance-relevant observations and to extend and add specifications to the maintenance list in these operating instructions accordingly. In addition, the maintenance instructions of the manufacturers of purchased parts must be observed!



8.4.6 Maintenance skills of the operating personnel

Interval: before each use

Tasks to be completed	Measures
Check the trolley for identifiable external defects and mechanical damage before each use.	warning If faults occur or faults or damage are identified during functional tests, the trolley should not be operated. Commissioning a defective trolley can cause serious injuries and property damage. The trolley should only be operated if potential faults have been rectified.
Perform a visual inspection and function check of the following components:	Seating of the fastening screws on the mounting plates of the wheels
ChassisPush/pull handle	Easy of movement of steering and fixed castors through push test
Door lockCastors	Brake effect of the wheel locks on the two steering castors through push test
Shelf supportsDeals	Do not use the trolley if the castors and push/pull handle appear damaged. If necessary, clean the push/pull handle.
	Damaged door seals should be removed. New seals can be attached to the trolley housing and inserted in the profile slot in the doors
Trailer coupling (optional)	Seating of the fastening screws for the drawbar and coupling pin
	Function of the safety mechanism against unintentional decoupling on the coupling pin
Check the castors and steering for free movement.	Check whether foreign objects are between the wheels and suspensions. Carefully remove them.

Table 16 List for maintenance interval: daily (Operating personnel)

SAFETY INSTRUCTION Store a defective trolley separately until the fault has been eliminated and mark it with a sticker/note that clearly identifies the defective trolley.



Interval: daily

Tasks to be completed	Measures
Perform a visual inspection and function check of the following components: Push/pull handle Castors All screw connections on the castors	If necessary, tighten loose screws. If necessary, remove foreign objects from the wheel suspensions and the steering. WARNING If faults occur or faults or damage are identified during functional tests, the trolley should not be operated. Commissioning a defective trolley can cause serious injuries and property damage. The trolley should only be operated if potential faults have been rectified.
Check stickers	Check whether all safety and carrying capacity stickers are present and legible. Replace illegible and missing stickers.

Table 17 List for maintenance interval: daily (Operating personnel)

Interval: weekly

Tasks to be completed	Measures
Perform daily maintenance as described about	ove.
Check the wear of the wheels.	Replace worn castors. Only use those parts that have been approved by the manufacturer.
Check all trolley parts for damage.	Replace parts if necessary. Take a damaged trolley out of service. In particular, observe and follow the safety instruction at the beginning of this section.

Table 18 List for maintenance interval: weekly (operating personnel)

SAFETY INSTRUCTION Store a defective trolley separately until the fault has been eliminated and mark it with a sticker/note that clearly identifies the defective trolley.



8.5 Defective components

8.5.1 Disassembly

When components to be replaced are disassembled, adhere to the instructions in the manufacturer's documentation, whether the specific component can be returned to the manufacturer for refurbishment.

8.5.2 Recycling



Dispose of recyclable components with the help of the national recycling system to protect the environment.



Check whether the recycling of contaminated recyclables is possible or permissible.

Recycle according to the local applicable environmental protection regulations.

8.5.3 Disposal

Use the substances and materials properly and dispose of them in compliance with the local environmental regulations.

8.5.4 Spare parts

Spare parts are not kept in stock. In case of large requirements, please contact Gmöhling Transportgeräte GmbH. We would be happy to provide you with a quotation.



9 Decommissioning

NOTICE: If the trolley is sold by the owner, the previous owner must also provide the new owner with these instructions for use.

9.1 Warning notices for decommissioning



WARNING

Risk of injury due to unsecured transport routes!

There is the risk of stumbling or slipping when transporting the trolley.

Arrange for proper illumination of the routes, ramps and steps over which loads are moved. Remove obstacles and stumbling points.

9.2 Taking out of service

Please carry out the following storage measures if it is intended not to operate the trolley for longer than 4 weeks.

Storage:

- Do not wrap the trolley in foil!
- Store the trolley in a dry location protected from the weather.
- Protect the trolley against getting dirty and wet.
- Secure the trolley against unauthorised use.
- Secure the trolley against rolling away.

9.3 Relocating:

Carry out the following work steps when the trolley is to be relocated.

Relocating:

- Cover the trolley to protect it against dirt and contamination
- Fix moving parts in place
- Do not apply the wheel lock
- Secure the load

NOTICE: Observe the instructions provided in *chapter 5 Transport on page 31*.

Decommissioning



9.4 Storage

The storage area should be cool and dry in order to prevent corrosion of the individual parts of the trolley.

The room temperature at the storage location must be constant between 10°C and 25°C. The atmospheric humidity of the storage space should not be greater than 50 %.

- Pack the trolley parts so that they are not damaged by external influences while the trolley is in storage.
- If necessary, use cardboard boxes and other packaging material.
- Safeguard the trolley against unintentional toppling or instability.

9.5 Disposal



- Dispose of packaging material in accordance with the applicable national regulations.
- Discard cardboard boxes, protective packaging made of plastic, and preservatives separately and properly.



The disposal of the G®-CUP Cupboard Trolley should be performed in accordance with the local disposal regulations and environmental protection laws in the country where it is used.

If the trolley has reached the end of its service life, ensure that it is disposed of safely and professionally when dismantling the trolley – particularly the parts or substances that are hazardous to the environment. These include plastics and batteries, among others.

Have the trolley disposed of properly by an authorised specialist company on account of the potential risk of environmental pollution.

Appendix



10 Appendix

10.1 Index of tables

Table 1 Signal words and signal colours	6
Table 2 Mandatory signs	7
Table 3 Warning signs	7
Table 4 Prohibition signs	7
Table 5 Fire safety symbols	8
Table 6 Rescue symbols	8
Table 7 Other symbols	
Table 8 Target groups	. 13
Table 9 Orientation values for frequent lifting and carrying frequencies in Germany and Europe	. 17
Table 10 Technical data	. 19
Table 11 Technical data: Dimensions and room volume	. 19
Table 12 Technical data: Number of shelves, compartments, compartment height, weight, load capacity	. 19
Table 13 Technical data: Dimensions, wheel diameter, number of module compartments	. 20
Table 14 Technical data: Number of plastic rails, grid spacing, weight, load capacity	
Table 15 Operating conditions	. 32
Table 16 List for maintenance interval: daily (Operating personnel)	. 50
Table 17 List for maintenance interval: daily (Operating personnel)	. 51
Table 18 List for maintenance interval: weekly (operating personnel)	. 51

Appendix



10.2 Index of figures

Figure 1 Identification plate	20
Figure 2 An overview of the G®-CUP cupboard trolley series E272	21
Figure 3 General view of the model E 2722	22
Figure 4 Screw cap closed	22
Figure 5 Screw cap open	22
Figure 6 Model E 2723, open	23
Figure 7 Model E 272., doors open with folded shelves	23
Figure 8 Variable potential use	23
Figure 9 Model E 272, doors open, design with shelves and mesh shelves	24
Figure 10 Details: Folding mechanism	24
Figure 11 Details: Magnet for keeping the doors open during loading and unloading	24
Figure 12 Details: Clip for keeping the doors open in the washing plant	24
Figure 13 Module cupboard trolley model E 2732	25
Figure 14 Details of assembly rail	25
Figure 15 Wire module basket, 200 mm	25
Figure 16 Installing the vertical bracket for the trolley roof	26
Figure 17 The assembly rails are suspended in the vertical bracket	26
Figure 18 Fixed castor	27
Figure 19 Steering castor with wheel lock	27
Figure 20 Central directional lock	27
Figure 21 Cylinder lock, including two keys	28
Figure 22 Chassis and tyres	28
Figure 23 Steering castors with central wheel lock	28
Figure 24 Coupling pin	29
Figure 25 Coupled drawbar	29
Figure 26 Drawbar that can be swung up	29
Figure 27 Sealing profile	30
Figure 28 Sealing profile on the door	30
Figure 29 Deploying driverless transport systems FTS	30
Figure 30 Wheel lock	37
Figure 31 Releasing the wheel lock	38
Figure 32 Handle in pushing position	40
Figure 33 Handle in pulling position	40
Figure 34 Steering behaviour with 2 steering castors	42
Figure 35 Steering behaviour with 4 steering castors	43
Figure 36 Folding grate	
Figure 37 Details of the folding grate	44
Figure 38 Automatic washing system	