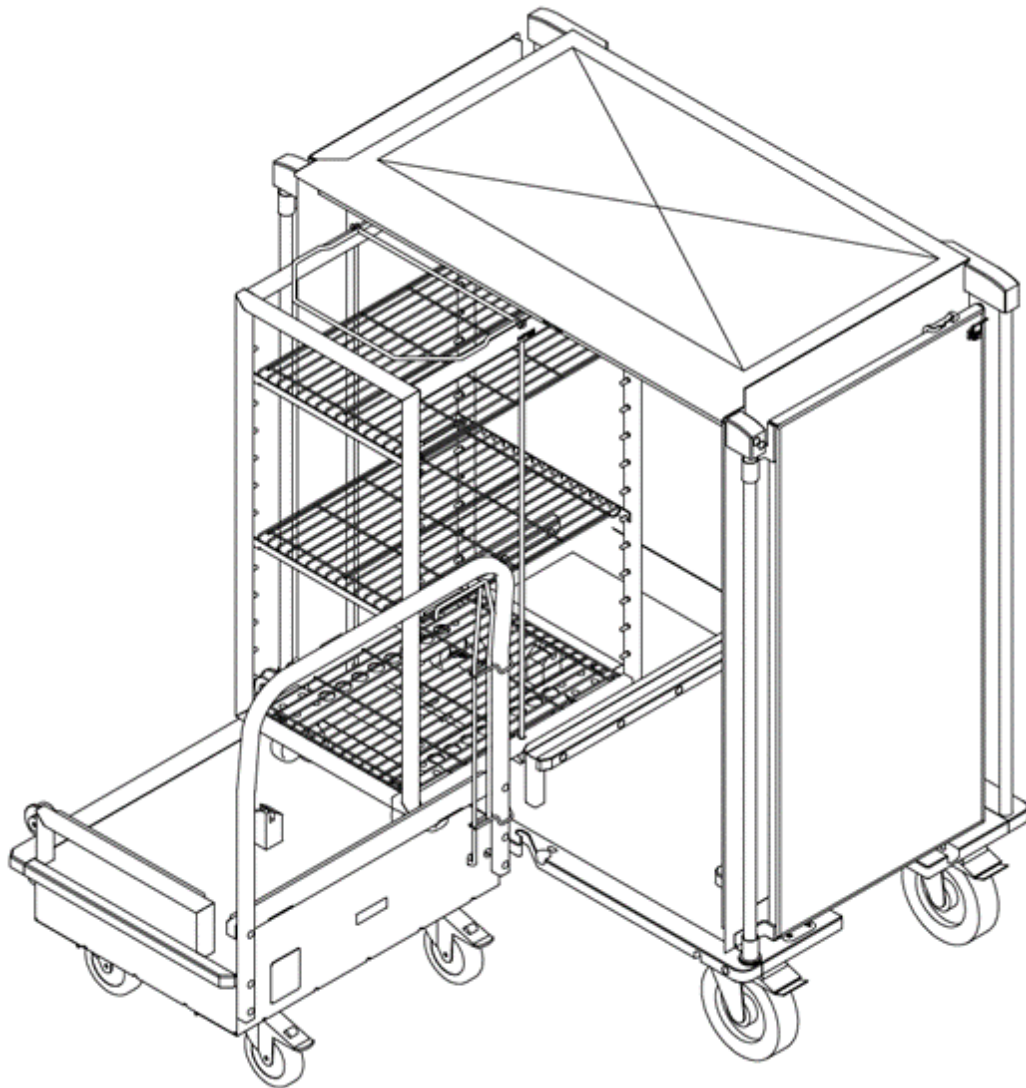


Operating instructions



Känguruh System®

Read the instructions prior to performing any task!

Manufacturer information

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1 General information

1.1 Product information

Product name	Känguruh System®
Product types	Transport cart
	Transfer dolly
	Push-in rack
	Känguruh platform

1.2 Target group

These operating instructions are intended for the following groups of people who perform the listed activities with or on the product:

Maintenance engineer

- Maintenance work on mechanical systems or trained activities on the electrical, cooling or heating systems
- Simple repairs
- Appropriately trained employees of the customer or an employee of the manufacturer

Operator

The operator or an authorised person must carry out the work.

- Check the condition of the entire unit
- Determine maintenance requirements

1.3 Symbols

DANGER

“Danger” indicates a hazardous situation that will result directly in death or serious injury.

WARNING

“Warning” indicates a hazardous situation that may result in serious injury.

CAUTION

“Caution” indicates a potentially hazardous situation that may result in minor to moderate injury.

! NOTICE

“Notice” indicates a situation that may result in damage to property.



“Notes” give tips on the correct use of the product.

2 Product description

2.1 Function

Operating principle

The Känguruh System® is intended for the transport, transfer and storage of sterile goods. Sterile goods can be transported between clean areas with the Känguruh System® without contaminating the sterile goods. Return transport can also be carried out using the Känguruh System®.

The Känguruh System® comprises the following components.

- Transport cart
- Push-in rack
- Transfer dolly
- Känguruh platform

StU or ISO standard

The dimensions of the Känguruh System® are respectively adapted to one of the following systems. The ISO standard and sterile goods unit (StU) systems are not compatible with each other.

Sterile goods unit (StU)	60 cm × 30 cm × 30 cm
ISO standard	60 cm × 40 cm × 30 cm

Transport cart

The transport cart takes in push-in racks and transports and protects the push-in racks from environmental influences. The interior of a cleaned and disinfected transport cart is a closed clean area in which sterile goods are transported through unclean areas.

The transport cart has a docking rail that enables a secure connection to transfer dollies.

Push-in rack

Push-in racks transport and store sterile goods in StU baskets or containers or in ISO standard baskets, on welded louvred shelves or on adjustable L- or U-shaped rails, depending on the design.

The push-in rack can be safely transferred between docked transport carts, transfer dollies and Känguruh platforms. The push-in racks are moved safely in the transport carts and on the transfer dollies. Push-in racks can be sterilised.

Transfer dolly

Transfer dollies transport push-in racks within a clean or unclean area. The transfer dolly can be securely connected with the docking rail to transport carts, Känguruh platforms and transfer stations. Push-in racks can then be safely transferred to transport carts and Känguruh platforms.

Känguruh platform

Känguruh platforms take over push-in racks and store them. Känguruh platforms can be combined with shelves and cabinets. Transfer dollies can dock safely on the docking rail.

2.2 Overview

Overview of transport cart

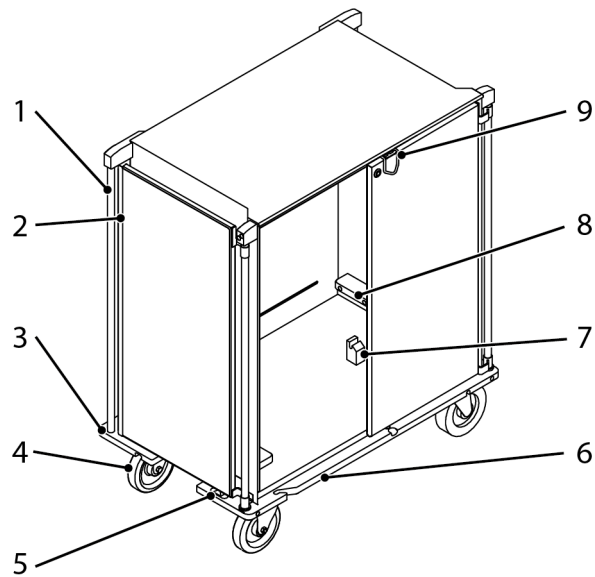


Fig. 1: Features of a transport cart

- 1 Push bar
- 2 Door
- 3 Bumper strip
- 4 Fixed/swivel castor
- 5 Extension for drain plug for door retainer
- 6 Docking rail
- 7 Anchor block
- 8 Cord corner guide / guide rails
- 9 2-point locking

Overview of push-in rack

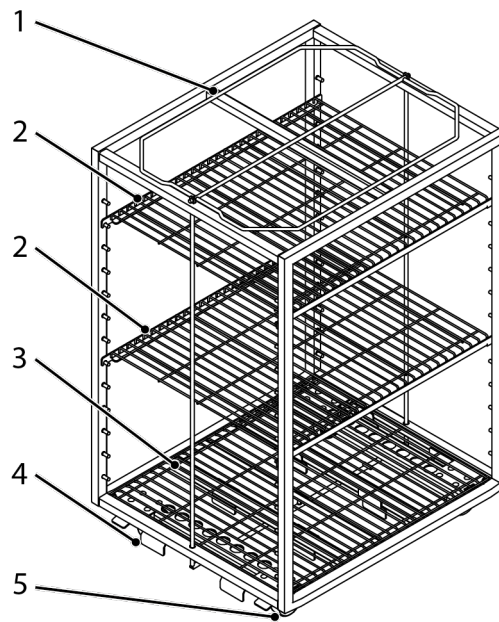


Fig. 2: Features of a push-in rack

- 1 Retaining wire
- 2 Insertion, here: height-adjustable louvred shelf
- 3 Louvred shelf inserted, not height adjustable
- 4 Optional carriers for automated transport
- 5 Castor

Overview of transfer dolly

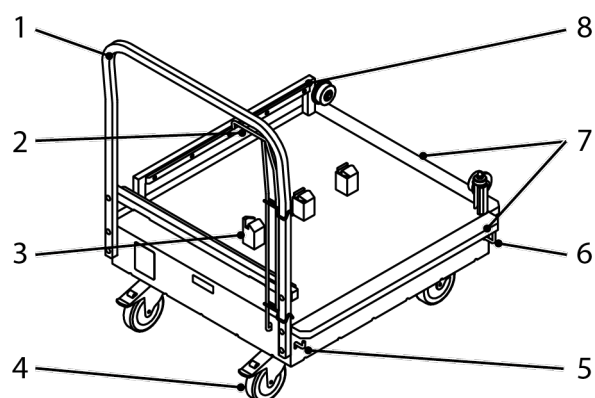


Fig. 3: Features of a transfer dolly

- 1 Push handle
- 2 Hand lever for unlocking
- 3 Anchor block
- 4 Swivel castor with lock
- 5 Hook for docking, unlockable by handle

- 6 Hook for docking, fixed
- 7 Impact protection and docking rail
- 8 Guide rail

Overview of Känguruh platform

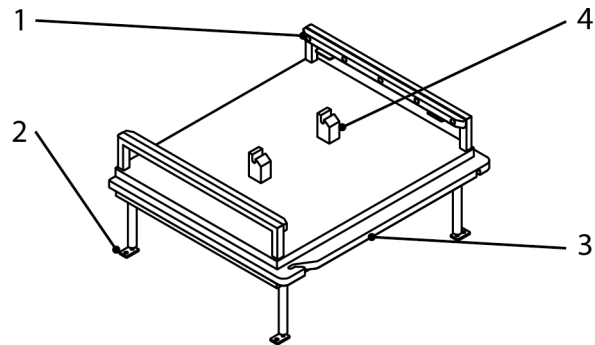


Fig. 4: Features of a Känguruh platform

- 1 Guide rail
- 2 Foot
- 3 Impact protection and docking rail
- 4 Anchor block

2.3 Equipment features

Transport cart

Housing	Made of stainless steel, closed on all sides. Chassis with continuous polymer bumper strip.
Interior	With mushroom-head guide pins (only 2×3 StU) or guide rails and anchor blocks to take in push-in racks.
Chassis	Made from stainless steel. The chassis is solid, torsion-resistant and suitable for out-of-house and HGV transport.
Swivel castors	With locks. The actuated locks prevent the castors from swivelling and turning.
Push bars	At every corner, for pulling and pushing the transport cart.
Doors	Lip seals protect the interior from dust and dirt entering.
Door lock	To protect the transported goods from unauthorised access
Docking rail	Holds and centres the transfer dolly when taking on push-in racks.
Top gallery	On the trolley top, for securing goods to be transported on the top.

Paper clamp	For clamping transport papers.
Sign holder	For inserting transport papers.
2-point locking	Transport-safe door lock
Transport latch	For securing the doors during transport. The optional sealing option provides maximum safety.
Central lock	For pedal actuation of the locks on both swivel castors at the same time.
Direction lock castors	Castors with direction lock can be locked for safe straight running.
Stainless steel castors	With stainless steel housing, ball bearing mounted wheel arch and abrasion-free rubber tyres. The bolted mounting plates make it easy to replace castors. The castor design complies with DIN standard 18867-8.
Towing device	Coupling and drawbar, to connect several transport carts for traction operation, available as standard version or as friction-damped version.
HGV transport securing device	To fix the transport carts securely on an HGV loading platform.
Adapter	For a docking height of 350 mm

Push-in rack

General information	Stable, self-supporting construction in stainless steel
Chassis	4 swivel castors
Retaining wire	For locking and releasing the push-in rack in anchor blocks.
Carrier	For automated transport in sterilisers.
Insertion	<p>Variants:</p> <p>Louvred shelf inserted, not height adjustable</p> <p>Height-adjustable louvred shelf</p> <p>Height-adjustable L-shape/U-shape profile</p> <p>Welded L-shape/U-shape profile</p>

Transfer dolly

General information	Sturdy, self-supporting design in stainless steel
Chassis	Standard: 2 swivel castors 2 swivel castors with locks The swivel castors allow free manoeuvrability in all directions. The actuated lock blocks the swivelling and movement of the swivel castor.
Swivel castors	With locks, actuated locks prevent the castors from swivelling and turning
Handles	For safely moving the device
Impact protection	On every corner. Protects against damage in the event of collision. The following components protect the device from impact: Handles with impact protection Docking rail
Platform	With guide rails and anchor blocks for inserting push-in racks
Docking rail	Holds and centres when taking on push-in racks

Känguruh platform

Platform	With mushroom-head guide pins and anchor blocks for inserting push-in racks
Docking rail	Holds and centres when taking on push-in racks
Feet	Height-adjustable

2.4 Equipment options**Transport cart**

Top gallery	On the trolley top, for securing goods to be transported on the top.
Paper clamp	For clamping transport papers.
Sign holder	For inserting transport papers.
2-point locking	Transport-safe door lock
Transport latch	For securing the doors during transport. The optional sealing option provides maximum safety.

Central lock	For pedal actuation of the locks on both swivel castors at the same time.
Direction lock castors	Castors with direction lock can be locked for safe straight running.
Stainless steel castors	With stainless steel housing, ball bearing mounted wheel arch and abrasion-free rubber tyres. The bolted mounting plates make it easy to replace castors. The castor design complies with the DIN 18867-8 standard.
Towing device	Coupling and drawbar, to connect several transport carts for traction operation, available as standard version or as friction-damped version.
HGV transport securing device	To fix the transport carts securely on an HGV loading platform.
Adapter	For a docking height of 350 mm

Push-in rack

Wire shelf	For loading a push-in rack with loose objects. Allows additional insertions
Insert rails	In the L-shape profile. Enables additional insertions for push-in racks with L-shape profile

Transfer dolly

Adapter	For a docking height of 350 mm
---------	--------------------------------

Känguruh platform

Adapter	For a docking height of 350 mm
---------	--------------------------------

2.5 Technical data

Transport cart

Model		KÄ-TW/VV 2×3 StU	KÄ-TW/VV 6 StU	KÄ-TW/VV 9 StU
Product code		7505946	7505939	7505940
Width ¹	mm / inch	1,249 / 49.2	965 / 37.99	1,249 / 49.2
Depth ¹	mm / inch	754 / 29.69	754 / 29.69	754 / 29.69
Height ¹	mm / inch	1,474 / 58.03	1,474 / 58.03	1,474 / 58.03
Weight ¹	kg / lbs	111 / 245	87 / 192	108 / 238
Capacity	--	2×3 StU	6 StU	9 StU
Payload ¹	kg / lbs	145 / 320	140 / 310	195 / 430
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	No	No	No
Docking height ¹	mm / inch	300 / 11.8	300 / 11.8	300 / 11.8
Chassis		2 swivel castors, 2 fixed castors, Ø 200 mm / 7.87 inch		
Adapter set		Product code 7506180, docking height 350 mm / 13.78 inch		

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Model		KÄ-TW/VV 1×2 ISO	KÄ-TW/VV 2×1 ISO	KÄ-TW/VV USA
Product code		7505944	7505945	7505974
Width ¹	mm / inch	1,249 / 49.2	1,249 / 49.2	1,249 / 49.2
Depth ¹	mm / inch	754 / 29.69	754 / 29.69	754 / 29.69
Height ¹	mm / inch	1,474 / 58.03	1,474 / 58.03	1,474 / 58.03
Weight ¹	kg / lbs	110 / 243	110 / 243	110
Capacity	--	1×2 ISO	2×1 ISO	Genesis
Payload ¹	kg / lbs	175 / 385	170 / 375	135 / 300
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	No	No	No
Docking height ¹	mm / inch	300 / 11.8	300 / 11.8	300 / 11.8
Chassis		2 swivel castors, 2 fixed castors, Ø 200 mm / 7.87 inch		
Adapter set		Product code 7506180, docking height 350 mm / 13.78 inch		

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Push-in rack

Model		KÄ-EG 3 StU	KÄ-EG 6 StU	KÄ-EG 9 StU
Product code		7505854	7505852	7505835
Width ¹	mm / inch	355 / 14.0	685 / 27.0	1,025 / 40.4
Depth ¹	mm / inch	600 / 23.6	600 / 23.6	600 / 23.6
Height ¹	mm / inch	1,053 / 41.46	1,053 / 41.46	1,053 / 41.46
Weight ¹	kg / lbs	15 / 33	22 / 49	28 / 62
Capacity	--	3 StU	6 StU	9 StU
Payload ¹	kg / lbs	45 / 100	90 / 200	135 / 300
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	Yes	Yes	Yes
Insertion	Louvred shelf			
Chassis	4 swivel castors, Ø 75 mm / 2.95 inch			

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Model		KÄ-EG 1 ISO	KÄ-EG 2 ISO	KÄ-EG USA
Product code		7505858	7505856	7505898
Width ¹	mm / inch	455 / 17.9	885 / 34.8	755 / 29.7
Depth ¹	mm / inch	600 / 23.6	600 / 23.6	600 / 23.6
Height ¹	mm / inch	1,053 / 41.6	1,053 / 41.6	1,053 / 41.6
Weight ¹	kg / lbs	16 / 35	25 / 55	23 / 51
Capacity	--	3 ISO	6 ISO	--
Payload ¹	kg / lbs	45 / 100	90 / 200	90 / 200
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	Yes	Yes	Yes
Insertion	Louvred shelf			
Chassis	4 swivel castors, Ø 75 mm / 2.95 inch			

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Model		KÄ-EG 3 StU	KÄ-EG 6 StU	KÄ-EG 9 StU
Product code		7505864	7505863	7505862
Width ¹	mm / inch	355 / 14.0	685 / 27.0	1,025 / 40.4
Depth ¹	mm / inch	600 / 23.6	600 / 23.6	600 / 23.6
Height ¹	mm / inch	1,053 / 41.6	1,053 / 41.6	1,053 / 41.6
Weight ¹	kg / lbs	17 / 33	29 / 64	38 / 84
Capacity	--	3 StU	6 StU	9 StU
Payload ¹	kg / lbs	45 / 100	90 / 200	135 / 300
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	Yes	Yes	Yes
Insertion	Inserts, L-profiles			
Chassis	4 swivel castors, Ø 75 mm / 2.95 inch			

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Model		KÄ-EG 1 ISO	KÄ-EG 2 ISO	--
Product code		7505866	7505865	--
Width ¹	mm / inch	455 / 17.9	885 / 34.8	--
Depth ¹	mm / inch	600 / 23.6	600 / 23.6	--
Height ¹	mm / inch	1,053 / 41.6	1,053 / 41.6	--
Weight ¹	kg / lbs	16 / 35	25 / 55	--
Capacity	--	4 ISO	8 ISO	--
Payload ¹	kg / lbs	60 / 132	120 / 265	--
Disinfection ²	Yes / no	Yes	Yes	--
Sterilisation	Yes / no	Yes	Yes	--
Insertion	Louvred shelf			
Chassis	4 swivel castors, Ø 75 mm / 2.95 inch			

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Transfer dolly

Model		KÄ-ÜW 3 StU	KÄ-ÜW 6 StU	KÄ-ÜW 9 StU
Product code		7505855	7505853	7505836
Width ¹	mm / inch	521 / 20.5	851 / 33.5	1,181 / 46.5
Depth ¹	mm / inch	762 / 29.9	762 / 29.9	762 / 29.9
Height ¹	mm / inch	949 / 37.4	949 / 37.4	949 / 37.4
Weight ¹	kg / lbs	23 / 51	29 / 64	34 / 75
Capacity	--	Push-in rack 3 StU	Push-in rack 6 StU	Push-in rack 9 StU
Payload ¹	kg / lbs	60 / 132	120 / 132	165 / 132
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	No	No	No
Docking height ¹	mm / inch	300 / 11.8	300 / 11.8	300 / 11.8
Chassis		2 swivel castors with locks, 2 fixed castors, Ø 125 mm		
Adapter set		Product code 7506181, docking height 350 mm / 13.78 inch		

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Model		KÄ-ÜW 1 ISO	KÄ-ÜW 2 ISO	KÄ-ÜW USA
Product code		7505859	7505857	7505899
Width ¹	mm / inch	621 / 24.5	1,051 / 41.4	921 / 36.3
Depth ¹	mm / inch	762 / 29.9	762 / 29.9	762 / 29.9
Height ¹	mm / inch	949 / 37.4	949 / 37.4	949 / 37.4
Weight ¹	kg	25 / 55	32 / 71	30 / 66
Capacity	--	Push-in rack 1 ISO	Push-in rack 2 ISO	Push-in rack USA
Payload ¹	kg / lbs	80 / 180	150 / 330	115 / 255
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	No	No	No
Docking height ¹	mm / inch	300 / 11.8	300 / 11.8	300 / 11.8
Chassis		2 swivel castors with locks, 2 fixed castors, Ø 125 mm		
Adapter set		Product code 7506181, docking height 350 mm / 13.78 inch		

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Känguruh platform

Model		KÄ-UG 2x3 StU	KÄ-UG 6 StU	KÄ-UG 9 StU
Product code		7505941	7505937	7505938
Width ¹	mm / inch	932 / 36.7	840 / 33.1	1,170 / 46.1
Depth ¹	mm / inch	700 / 27.6	700 / 27.6	700 / 27.6
Height ¹	mm / inch	410 / 16.1	410 / 16.1	410 / 16.1
Weight ¹	kg / lbs	23 / 50.7	19 / 41.9	23 / 50.1
Capacity	--	2×3 StU	6 StU	9 StU
Payload ¹	kg / lbs	125 / 275	120 / 265	165 / 365
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	No	No	No
Docking height ¹	mm / inch	300 / 11.8	300 / 11.8	300 / 11.8
Adapter set		Product code 7506182, docking height 350 mm / 13.78 inch		

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

Model		KÄ-UG 2x1 ISO	KÄ-UG 1x2 ISO	KÄ-UG USA
Product code		7505942	7505943	7505975
Width ¹	mm / inch	1,040 / 40.9	1,134 / 44.6	910 / 35.8
Depth ¹	mm / inch	700 / 27.6	700 / 27.6	700 / 27.6
Height ¹	mm / inch	410 / 16.1	410 / 16.1	410 / 16.1
Weight ¹	kg / lbs	22 / 48	25 / 55	21 / 46
Capacity	--	2×1 ISO	1×2 ISO	6× Genesis
Payload ¹	kg / lbs	150 / 330	205 / 450	115 / 255
Disinfection ²	Yes / no	Yes	Yes	Yes
Sterilisation	Yes / no	No	No	No
Docking height ¹	mm / inch	300 / 11.8	300 / 11.8	300 / 11.8
Adapter set		Product code 7506182, docking height 350 mm / 13.78 inch		

¹The figures are approximate values. Deviations are possible.

²See chapter on Disinfection.

2.6 Rating plate

The rating plate of the Känguruh platform is located on the side opposite the docking rail.

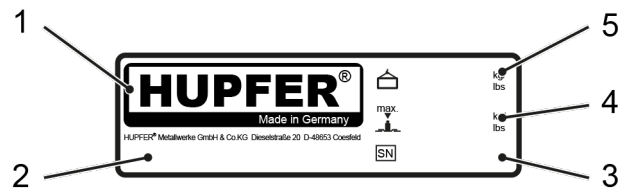


Fig. 5: Känguruh platform rating plate

- 1 Manufacturer and address
- 2 Type designation
- 3 Order number
- 4 Tare weight
- 5 Payload

3 Safety information

3.1 Intended use

The Känguruh System® is intended for the distribution, storage and transport of sterile goods in StU containers or ISO standard containers.

Transport cart, transfer dolly and push-in rack are approved for mechanical cleaning in washing devices if the washing device meets the requirements stipulated in the "Approved cleaning types" chapter.

Intended use includes following the prescribed procedures, complying with the given specifications, and using the genuine accessories that are provided or additionally available. Any other use of the device is considered inappropriate.

3.2 Improper use

The top side of the transport cart is not intended for use as a space for storing objects.

Transport carts may only be moved when the doors are closed, and they may only be pushed or pulled using the push bars. Gallery bars are not suitable as handles for pushing or pulling the transport cart.

It may not be used for transporting living creatures. Persons must not sit or stand on or in the device.

In the case of improper use, the manufacturer and suppliers shall assume no liability for resulting damage. Damage caused by improper use shall result in loss of liability and of guarantee claims.

3.3 Safety instructions

3.3.1 General information

The transport cart may only be used in a technically sound condition, while taking risks and safety into consideration, for its intended purpose and in accordance with the operating instructions.

All operating elements and controls must be in a technically sound condition and function reliably.

Before each use, the transport cart must be checked for any visibly apparent damage or defects. If damage occurs, immediately notify those responsible and shut down the transport cart.

Changes or conversions are only permitted after consultation and written consent from the manufacturer.

Transport carts can move off under their own weight and in an uncontrolled manner if the wheels are not locked and the direction lock is engaged.

3.3.2 Transport

If the appliance has to be lifted, only use lifting gear and load-bearing equipment approved for the weight of the device.

Only use transport vehicles that are approved for the weight of the transport vehicle.

The trolley has no attachment points for attaching eyes or similar lifting aids.

Transport trolleys with loosened directional fixation lurch during when moving. On inclined planes, trolleys with a loose directional can move independently and in an uncontrolled manner, e.g. on loading e.g. on loading ramps. Only loosen the directional lock briefly when the trolley is stationary and on horizontal levels, e.g. to move sideways.

When the trolley is transported, the trolley must be additionally secured. The wheel locks are not sufficient to secure the trolley for transport. They must not be locked during transport on the truck, as the locking mechanism will be damaged by the forces that occur the locking mechanism will be damaged.

3.3.3 Operation and use

Transport carts can move off independently and in an uncontrolled manner if the wheels are not locked. Secure the stationary transport cart against rolling away.

Do not park on sloping ground. Only move transport carts with the locks released. Moving with the locks engaged will damage the chassis. Castor locks are not brakes. Only engage the locks when the transport cart is stationary. Only release the direction lock briefly when the transport cart is at a standstill and on level ground, e.g. to move it sideways.

Keep an overview of the route and move the transport cart with foresight, for example by pulling when necessary. Watch out for children, other persons and obstacles. Do not move the transport cart over steps. Two people should move the transport cart on slopes.

When fully loaded, never open all drawers at the same time, otherwise the transport cart may topple over.

Never try to catch a transport cart that is falling over. Transport carts are heavy and can cause serious injury. Move the transport cart with foresight.

3.3.4 Cleaning

Only disinfect and sterilise devices that are approved for disinfection and sterilisation according to their technical specifications.

Devices have high temperatures after cleaning and hot sterilisation. Observe the cooling time.

3.3.5 Maintenance

Troubleshooting may only be carried out by maintenance technicians.

3.3.6 Safety devices

Locks on the castors. The locks must be activated when the transport trolley is stationary to prevent the transport trolley from rolling away.

Direction lock on the swivel castors. The direction lock must be activated when moving the cart and on sloping ground. Only release the direction lock to move the cart sideways.

4 Transport



WARNING

Contusion hazard

Transport carts rolling in an uncontrolled way may crush persons.

- Never leave the transport cart to roll unattended.
- Only drive uphill or downhill if you can control the transport cart. If necessary, involve a second person.
- Only park the transport cart on level surfaces.
- Each time you park the transport cart, secure it with both locks against rolling away.
- Fix the wheels in the “straight ahead” position.



NOTICE

Damage to the locks

The forces that occur during transport by lorry cause damage to engaged locks.

- Secure the transport cart with a transport securing device.
- Release the locks during transport by lorry.



HGV transport securing device

The equipment option “HGV transport securing device” is available for securing the transport cart during HGV transport.

4.1 Delivery

Delivery is performed by a transport company, whose specialists are responsible for securing the load during transport. At the place of delivery, the transport cart can then be moved on its own wheels.

4.2 In-house transport



WARNING

Contusion hazard

Transport carts rolling in an uncontrolled way may crush persons.

- Never leave the transport cart to roll unattended.
- Only drive uphill or downhill if you can control the transport cart. If necessary, involve a second person.
- Only park the transport cart on level surfaces.
- Each time you park the transport cart, secure it with both locks against rolling away.
- Fix the wheels in the "straight ahead" position.

Only use transport vehicles that are approved for the total weight of the device.

- Only transport push-in racks if the retaining wire is secured in the anchor block.
- Release the locks during transport.

4.3 Lifting

The transport cart does not have any attachment points for eyelets or similar lifting aids.

Always transport the transport cart upright if possible. It can be lifted using a lifting platform, for example.

5 Commissioning



WARNING

Contusion hazard

Transport carts rolling in an uncontrolled way may crush persons.

- Never leave the transport cart to roll unattended.
- Only drive uphill or downhill if you can control the transport cart. If necessary, involve a second person.
- Only park the transport cart on level surfaces.
- Each time you park the transport cart, secure it with both locks against rolling away.
- Fix the wheels in the "straight ahead" position.

! NOTICE

Instructing operating staff

Before commissioning, operating staff must be instructed how to operate the transport cart correctly.



Help protect our environment. Separate the packaging materials and recycle them. Dispose of:

- Packaging and foils in the (yellow) recycling bin.
- Cardboard boxes and paper in the paper recycling bin.

Clean the device thoroughly before first use (see cleaning instructions).

Check the functions of the device:

- Functionality of all mechanical parts
- Functionality of the controls
- Functionality of the locks

6 Operation



WARNING

Contusion hazard

Transport carts rolling in an uncontrolled way may crush persons.

- Never leave the transport cart to roll unattended.
- Only drive uphill or downhill if you can control the transport cart. If necessary, involve a second person.
- Only park the transport cart on level surfaces.
- Each time you park the transport cart, secure it with both locks against rolling away.
- Fix the wheels in the “straight ahead” position.



CAUTION

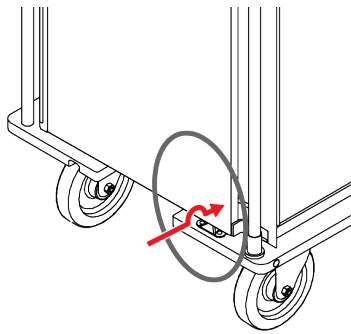
Contamination of sterile goods

Contamination of sterilised goods represents a health hazard.

- Observe the operator's instructions for maintaining sterility.

6.1 Opening and closing doors

Extension for drain plug



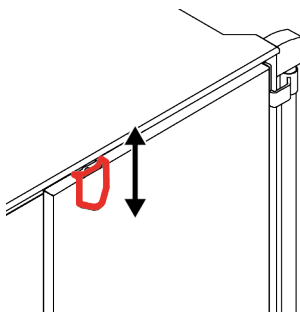
To lock the open doors in place, extensions for drain plugs are attached on the lower bumper strips.

1. ➤ Open the doors.
2. ➤ Flip the doors over until the doors snap into place behind the extensions for drain plugs.

The tray transport cart E variant also has extensions for drain plugs on the bumper strips to lock the closed doors.

1. ➤ Close the doors.
2. ➤ Flip the doors over until the doors snap into place behind the extensions for drain plugs.

2-point locking

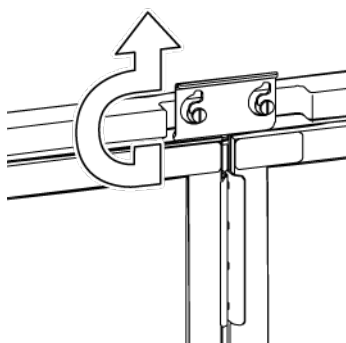


Transport carts have a 2-point locking system to lock the doors securely.

- Raise the lever.
- ➔ You can open or close the doors.

When you close the doors, the lever must engage securely behind the catch.

Transport latch



The transport latch provides additional protection for the doors to stop them unintentionally springing open, for example during HGV transport.

You can open the transport latch.

- Open the transport latch as shown in the figure.
- ➔ You can open the doors at the door lock.

You can close the transport latch.

- Close the transport latch by reversing the steps above.
- ➔ The doors are additionally locked.

6.2 Moving the cart

WARNING

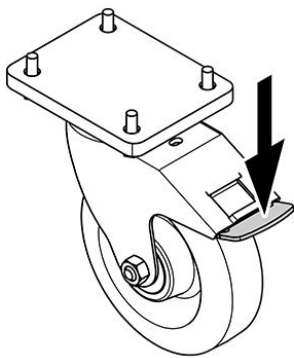
Risk of crushing

Transport carts rolling in an uncontrolled way may crush persons.

- Never leave the transport cart to roll unattended.
- Only transport up or down an incline if you can control the transport cart. If necessary, involve a second person.
- Only park the transport cart on level surfaces.
- Each time you park the transport cart, secure it with both locks against rolling away.
- Fix the wheels in the “straight ahead” position.

Engaging the locks

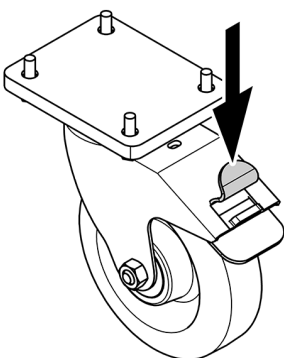
Swivel castors with locks can block the wheel from turning and swiveling. When the locks on both swivel castors are engaged, the transport cart is secured against rolling away.



→ Engage the lock as shown on the left.

➔ The wheel cannot turn or swivel.

Releasing the lock



→ Release the lock as shown on the left.

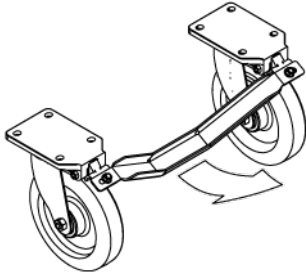
➔ The wheel can turn and swivel.

Actuating the central lock tread

Optionally, the transport carts have a central lock tread. With the central lock tread, the locks on both swivel castors are operated simultaneously. The central lock tread for the locks is marked *[Stop.]*

—> Engage the lock as shown on the left.

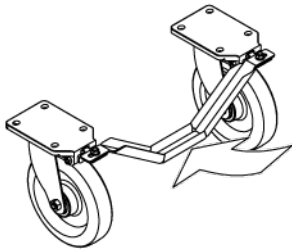
➔ The wheel cannot turn or swivel.



Releasing the central lock tread

—> Release the lock as shown on the left.

➔ The castors can turn and swivel.



Actuating the direction lock

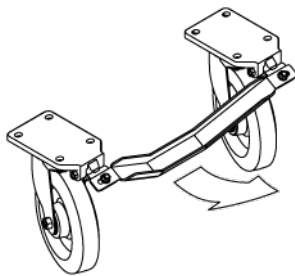
WARNING

Contusion hazard

Transport carts on which the direction lock has been released roll from side to side when in motion. Transport carts on which the direction lock has been released can move off under their own weight and in an uncontrolled manner on inclined surfaces, e.g. loading ramps. The transport cart is heavy, and if it rolls away out of control, there is a risk that people may be injured by being hit or crushed.

- Activate the direction lock for the wheels.
- Only release the direction lock when the transport cart is at a standstill and on level ground.

Optionally, the transport carts have a central lock tread. With the central lock tread, the wheels are fixed straight ahead.



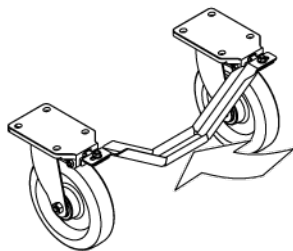
— Lock the direction of the wheels as shown on the left.

- ➔ When the direction of the wheels is fixed, the cart is more stable when travelling on longer routes.
- ➔ The direction lock snaps in audibly.

Release the direction lock

Only release the direction lock to manoeuvre in confined spaces, e.g. to move the appliance sideways. Afterwards, reactivate the direction lock.

— Release the direction of the wheels as shown on the left.



- ➔ The wheels can move freely again.

Moving with the push handles



WARNING

Contusion hazard

Transport carts rolling in an uncontrolled way may crush persons.

- Never leave the transport cart to roll unattended.
- Only drive uphill or downhill if you can control the transport cart. If necessary, involve a second person.
- Only park the transport cart on level surfaces.
- Each time you park the transport cart, secure it with both locks against rolling away.
- Fix the wheels in the "straight ahead" position.



NOTICE

Checking the door lock

If they are not properly locked, the doors may accidentally spring open and items may fall out from inside the transport cart.

- Before each trip, check that the doors are correctly locked.

1. ➤ Close the doors.
2. ➤ Release the locks.
3. ➤ Move the transport cart by the push bars
4. ➤ Make sure that the path ahead is clear.
5. ➤ Only move the transport cart over flat, dry and stable surfaces.
6. ➤ Have someone help you if the transport trolley has to be moved on a slope.
7. ➤ Secure the transport cart with the locks when stationary.

6.3 Docking the transfer dolly

The transfer dolly can dock on transport carts, Känguruh platforms or other devices equipped with a docking rail. For docking, a transfer dolly has two wire hooks and a manual release (marked in red in the figure).

- Hook 1 is immovable
- Hook 1 is movable
- Hook 2 can be opened with the manual release

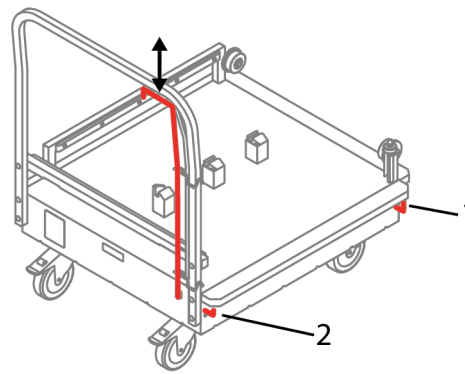
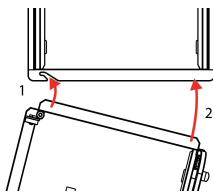


Fig. 6: The control elements for docking are marked in red

The transfer dolly can be docked to devices that have a docking rail. If the devices are designed for the same push-in racks, the docking rails fit together, e.g. all devices for 3 StU can be docked to each other.

If the transfer dolly is docked to a mobile device, e.g. a transport cart, the unit must be secured with the locks.



1. ➤ Move the transfer dolly diagonally to the docking rail.
2. ➤ Move hook 1 to the lug.
➔ Hook 1 is docked.
3. ➤ Move hook 2 to the docking rail.
➔ The transfer dolly audibly docks.

You can safely transfer a push-in rack between two docked devices, for example from a transfer dolly to a transport cart.

6.4 Undocking the transfer dolly

You can undock the transfer dolly if the following conditions are met.

- The push-in rack is securely latched into the anchor block.
- The locks on the transport cart are actuated.

1. ➤ Release the locks on the transfer dolly.
2. ➤ Operate the manual release.
3. ➤ Pull the transfer dolly out of the docking rail.
➔ The transfer dolly is undocked.

6.5 Transferring the push-in rack

The push-in rack has a retaining wire (marked in red in the figure). With the retaining wire, the push-in rack can engage in anchor blocks and is secured against uncontrolled movements.

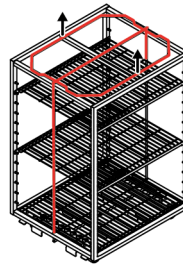


Fig. 7: The retaining wire is marked in red.

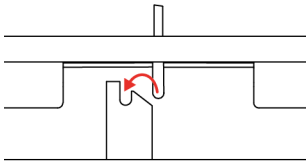
You can transfer a push-in rack if the following conditions are met.

- The transfer dolly is securely docked.
- The locks of all movable devices are actuated.

1. ➤ Lift the retaining wire.

2. ➤ Move the push-in rack.

➔ The retaining wire audibly snaps into the anchor block. (see figure)



6.6 Loading the push-in rack

CAUTION

Risk of tipping over

Extended drawers and containers can cause the push-in rack to become unbalanced.

- Load the push-in rack evenly.
- Close drawers after loading.

CAUTION

Contamination of sterile goods

Contamination of sterilised goods represents a health hazard.

- Observe the operator's instructions for maintaining sterility.

Depending on the version, the push-in rack can be loaded with ISO standard boxes, StUs or loose objects.

Only load the push-in rack when the retaining wire is engaged in an anchor block.

7 Care and cleaning

7.1 Care instructions

The door lip seals become brittle over time, for example due to high temperature fluctuations.

- Treat them at regular intervals with commercially available care products for lip seals.

7.2 Cleaning intervals

Interval	Maintenance work
As needed and according to the in-house hygiene concept	Cleaning and disinfecting the Känguruh System® Sterilising the push-in rack

7.3 Permissible cleaning types



CAUTION

Spreading water

Wet and dripping transport trolleys distribute water on paths. There is a severe risk of slipping on wet paths.

- Dry the transport trolley after cleaning.
- Remove the water from the interior, e.g. by tilting the transport trolley by 5°.



NOTICE

Deformation at high temperatures

The polymers used deform at high temperatures and longer contact times.

- Restrict the contact time to max. 3 seconds.
- Restrict the temperature to max. 120 °C.



NOTICE

Bearing damage

The castor bearings are greased. Washing out the bearing grease will result in bearing damage.

- Do not direct jets directly at the castor bearings.

! NOTICE

Damage due to high-pressure cleaning

Lip seals on the door and housing can become loose due to direct high-pressure jets and damage will result.

- Do not point the spray directly at the lip seals.
- Keep a distance of at least 30 cm between the nozzle and the device.
- Use a flat stream nozzle.

Cleaning type		Definition of the cleaning operation	Approval for		
			KÄ-TW/VV	KÄ-EG	KÄ-ÜW
Manual cleaning	Dry	Cleaning with dry cleaning agents	✗	✗	✗
	Damp	Cleaning with a damp cloth and degreasing liquid cleaner	✓	✓	✓
	Wet	Cleaning with a wet sponge and degreasing liquid cleaner	✓	✓	✓
Water hose	Pressure ≤ 8 bar	Cleaning with a spray jet and degreasing cleaning agents if required: <ul style="list-style-type: none"> ■ Do not spray into the bearings. 	✓	✓	✓
High-pressure/steam cleaning	High-pressure ≤ 200 bar	Cleaning the surfaces: <ul style="list-style-type: none"> ■ max. 30-90 seconds ■ Do not spray into the bearings ■ Use a flat stream nozzle ■ Keep a distance of at least 30 cm 	✓	✓	✓
	Wet steam ≤ 135° C	Cleaning the surfaces: <ul style="list-style-type: none"> ■ max. 30-90 seconds ■ Short exposure time for individual sections ■ Do not spray into the bearings 	✓	✓	✓
Washing devices	Water temperature ≤ 90°C	Spraying with cleaning and rinsing agent: <ul style="list-style-type: none"> ■ max. 30-90 seconds 	✓	✓	✓

7.4 Permissible cleaning agents

! NOTICE

Incorrect cleaning agents

Incorrect treatment of the installed material surfaces will result in damage and corrosion.

- Only use cleaning agents approved for cleaning.
- Follow the instructions of the cleaning agent manufacturer.




Suitable cleaning agents



The manufacturer cannot assess the suitability of specific detergents or disinfectants.

- Check the notes on the cleaning agents or disinfectants to find out whether they are suitable for the materials of the transport cart.
- If in doubt, ask the manufacturer of the agent if it is suitable for the materials of the transport cart.

Cleaning agent	Approval
Degreasing agent	✓
■ Neutral liquid cleaner	
Salty cleaning agents	✗
■ Table salt	
■ Hydrochloric acid	
Sulphuric cleaning agents	✗
■ Sulphur dioxide	
■ Sulphuric acid	
Chlorinated cleaning agents	✗
■ Chlorine cleaner	
■ Sea water	
■ Bleach	
Ferrous material	✗
■ Water with iron content	
Low-oxygen cleaning agents	✗
■ Low-oxygen water	
■ CO2 atmosphere	
Neutral cleaning agents	✓
■ Neutral cleaning agents pH 7	
■ Slightly acidic cleaning agents pH 6 – 7	
■ Slightly alkaline cleaning agents pH 7 – 8	
Acidic cleaning agents pH 1 – 5	✗
■ Acids	

Cleaning agent	Approval
Alkaline cleaning agents pH 8 – 14	
■ Alkalis	
Abrasive cleaning agents	
■ Scouring pad	
■ Pot scrubber	
Non-abrasive cleaning agents	
■ Uncoated sponges	
■ Soft cloths	

7.5 Material compatibility

When selecting the cleaning agent, make sure it is compatible with the materials used.

Material	Components
Stainless steel	Housing, doors, interior, roof, frame
PE 500 (polyethylene)	Bumper strips, disk bumper
PA (polyamide)	Extensions for drain plugs, anchor block
PP (polypropylene)	Guide rail
PTFE (polytetrafluoroethylene)	Disk bumper for the push-in rack

7.6 Manual cleaning

3. ➤ Clean the outer surfaces of the transport cart after use or as required.
4. ➤ For wet cleaning, use a soft cloth or an uncoated sponge.
5. ➤ Use degreasing liquid cleaners.
6. ➤ Rinse so that all detergents and disinfectants are completely removed.
7. ➤ Dry the interior and exterior surfaces after cleaning.

7.7 Mechanical cleaning

Before washing

Transport cart

1. ➤ Open the doors fully.
 - ➔ The doors snap into place behind the catch.
2. ➤ Remove all loose objects.
 - ➔ The transport cart is ready for washing.

Push-in rack

1. ➤ Completely empty the push-in rack.
2. ➤ Check that the support wire is latched into place.
 - ➔ The push-in rack is ready to wash.

After washing:

1. ➤ The transport trolley must be free of cleaning agents and disinfectants.
2. ➤ Inspect the transport cart for damage to the housing, cart doors, castors and locks from the washing process. Only use transport carts that are technically faultless.
3. ➤ Dry the transport cart completely, e.g. dry the interior by inclining the transport cart. Leaking water creates a slip hazard.
 - ➔ The transport cart is ready for operation.

7.8 Disinfecting

All the surfaces can be disinfected with commercially available surface disinfectants.

! NOTICE

Damage to property

High concentrations of disinfectant can cause corrosion damage.

- Follow the instructions of the disinfectant manufacturer.

7.9 Sterilisation

WARNING

Risk of burns

After hot sterilisation, the devices have a high temperature. Direct contact with hot devices leads to burns.

- Allow the devices to cool down for at least 20 minutes after sterilisation.
- Wear heat-insulating protective gloves.

Push-in racks can be sterilised in sterilisers.



Push-in racks must be fitted with adapters before being taken into a conveyor or steriliser.

- Be sure to fit the push-in racks with the correct adapters before loading and unloading onto a conveyor belt.

Follow the steriliser's operating instructions and the operator's instructions.

8 Maintenance and repair

WARNING

Unqualified staff

Danger from incorrect handling of mechanical or electrical components.

- Only qualified personnel may carry out maintenance work.

8.1 Maintenance intervals

Regularly check that the following components are functioning properly:

Interval	Maintenance work	Personnel
daily	Carry out a visual inspection of the entire unit.	Operator
every six months	<ul style="list-style-type: none"> ■ Check entire unit for distortion and mechanical damage ■ Check effectiveness of the locks ■ Check mechanical strength of the wheels ■ Check functionality of the central lock treads 	Maintenance engineer
annually	Effectiveness of the door lip seals	Operator

8.2 Troubleshooting

In the event of malfunctions and complaints within the guarantee period, contact our service partners. After the guarantee period has expired, have any necessary repair work carried out by our service partners or qualified electricians.

Fault description	Cause	Remedy	Personnel
Transport trolley pulls to one side during transport	Castor bearings damaged	Replace castors	Maintenance engineer
Running noises made by wheels	Wheel bearings damaged	Replace worn wheels	Maintenance engineer
Castor lock no longer working	Lock worn out	Replace lock	Maintenance engineer
Doors do not close correctly	Door seal defective	Replace door seal	Maintenance engineer
	2-point locking tension spring defective	Replace tension spring	Maintenance engineer

8.3 Repairs and spare parts

Spare parts and accessories are available from our customer service. Replace defective components with genuine spare parts. Only then can safe and reliable operation be guaranteed. When ordering spare parts or requesting customer service, always state the order number and the information on the rating plate. This information helps avoid follow-up queries and speeds up the process.

8.4 Recommissioning

The transport cart may only be used in a technically sound condition, for its intended use, and in accordance with the operating instructions. Check the transport cart for visible damage before each use. In the event of damage, inform the responsible departments immediately. Only operate transport carts in faultless technical order.

- Check the transport cart functions, especially the lock and cooling.
- Clean the transport cart thoroughly before putting it back into operation.

9 Disposal



Help protect our environment. Make sure that the materials are recycled.

- Have the device disassembled and disposed of by recycling companies. All the materials are recyclable.



Take the components to a designated disposal centre.