

Operating instructions



Open tray dispensers/open sided basket dispensers OTA/OKO

Manufacturer information

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General information

1.1 **Product information**

Product names

- OTA open tray dispenser
- OKO open sided basket dispenser

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

Operating staff

- Standard operating steps
- Rectifying faults as described in the "Troubleshooting" section
- Cleaning

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.



A 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

Open tray dispensers and open sided basket dispensers transport and dispense items at a constant height.

Open tray dispensers and open sided basket dispensers consist of a base unit for stacking equipment and a platform for baskets or trays, suitable for the stacking of baskets or trays. The items rest securely on the platform for baskets or trays. As the load increases, the spring-loaded platform for baskets or trays sinks. As the number of items decreases, the platform for baskets or trays rises. Open tray dispensers and open sided basket dispensers therefore ensure that the items can be removed at a constant height.



2.2 Overview

OTA variant – open tray dispenser

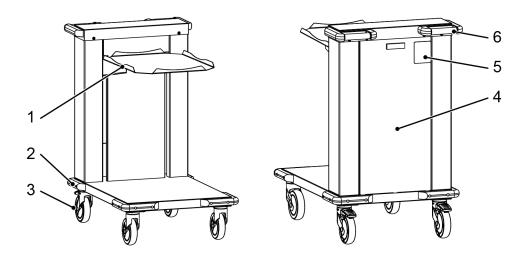
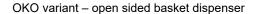


Fig. 1: OTA – open tray dispenser

- 1 Platform for trays
- 2 Corner bumper
- 3 Swivel castor with lock
- 4 Rear panel of the spring case
- 5 Rating plate
- 6 Push handle with impact protection



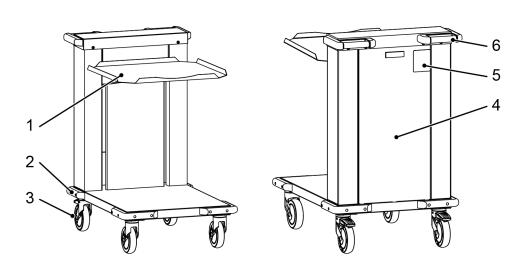


Fig. 2: OKO - open sided basket dispenser

- 1 Platform for baskets
- 2 Corner bumper
- 3 Swivel castor with lock
- 4 Rear panel of the spring case
- 5 Rating plate
- 6 Push handle with impact protection



2.3 Equipment features

General information Sturdy, self-supporting design in stainless

steel.

Chassis Standard version with 2 swivel castors and

2 swivel castors with locks.

The swivel castors allow free manoeuvra-

bility in all directions.

Wheels and swivel cas-

tors

With polymer housing, ball bearing

mounted wheel arch and abrasion-free

rubber tyres.

Swivel castors with locks When engaged, the locks prevent the cas-

tors from swivelling and turning.

Platform for baskets or

trays

The spring-loaded platform for baskets or trays accommodates matching baskets or

trays and presents the baskets or trays at a

constant height.

Spring case Contains the guide elements and tension

springs that hold the platform for baskets or trays. The spring case protects against

access to the tension springs.

Handles For safely moving and steering the trans-

port cart.

Impact protection on every corner. Protects against damage

in the event of collision. The following components protect the transport cart from

impact:

Corner bumpers

Handles with impact protection

2.4 Equipment options

The stacking equipment can be equipped with the following optional accessories:

Corrosion-resistant and maintenance-free polymer wheels, with thread guard.



2.5 Technical data

		OTA	ОКО
Product name		Open tray dispenser	Open sided basket dispenser
Total weight	kg	26	27
Max. load	kg	80	80
Dimensions	mm	798 x 558 x 900	798 x 558 x 900
$W \times D \times H$			
Lifting height	mm	480	480
Approved items	mm	Trays	Baskets
		■ 530 × 370	■ 500 × 500
		■ 530 × 325	stackable
		stackable	
Effective dimensions of the basic unit for	mm	depending on the platform for trays	520 × 520
stacking equipment		■ 540 × 380	
		■ 490 × 380	

2.6 Rating plate

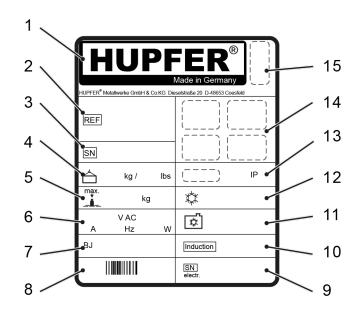


Fig. 3: Rating plate

- 1 Manufacturer and address
- 2 Type designation and product code
- 3 Order number
- 4 Total weight
- 5 Payload, total
- 6 Electrical connection
- 7 Model year
- 8 Product code as barcode

- 9 Electrical serial number
- 10 Induction frequency
- 11 Refrigerant
- 12 Refrigeration capacity
- 13 Protection code
- 14 Certification mark/CE label if available
- 15 Disposal of old appliances



3 Safety information

3.1 Intended use

The open tray dispenser/open sided basket dispenser is intended for the manual transport and provision of trays/baskets. Only approved items may be transported with the stacking equipment. The items that are suitable are determined by the size of the platform mounted for baskets or trays.

Any use other than or beyond this is considered inappropriate.

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 unit is considered inappropriate.

3.2 Improper use

The following uses are prohibited and are considered misuse:

- Loading with items other than those that have been approved.
- Transport of persons
- Transport of unsecured goods
- Exceeding the capacity
- Any misuse of the transport cart
- Manual preloading of the platform for baskets or trays or of the tension springs.

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

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 stacking equipment 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 functioning reliably.

Before each use, the stacking equipment must be checked for any visibly apparent damage and defects. If damage occurs, inform the responsible offices immediately and take the stacking equipment out of use.

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

the stacking equipment may move off independently and in an uncontrolled manner if the wheels are not locked.

3.3.2 Transport

Use only hoists and load handling devices approved for the total weight of the stacking equipment during loading operations.

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

The stacking equipment does not have any attachment points for eyelets or similar lifting aids.

3.3.3 Assembly

Pretensioned springs or holders for platforms for baskets or trays can spontaneously release and cause injuries. Do not manually pretension the tension springs or the platform for baskets or trays. Support the holders for the platform for baskets or trays as required.

3.3.4 Operation and use

Stacking equipment can move off independently and in an uncontrolled manner if the wheels are not locked. Secure the stationary stacking equipment against rolling away.

Release the locks before moving. Engaged locks will damage the chassis when moving.

Keep an overview of the route and move the stacking equipment with foresight. Watch out for children, other persons and obstacles. Do not move the stacking equipment up or down steps. Two persons should move the stacking equipment on slopes.

Never catch tipping stacking equipment. Stacking equipment is heavy when loaded and can cause serious injury. Move the stacking equipment with foresight.



Only secure stacking equipment with the locks when stationary. The locks do not provide a braking function.

3.3.5 Cleaning

The transport cart must not be cleaned with high-pressure or steam cleaners.

3.3.6 Maintenance

Troubleshooting may only be carried out by maintenance technicians.

Work on electrical equipment may only be carried out by electricians. The work must be carried out in compliance with the rules of electrical engineering.

Work on the refrigeration system may only be carried out by refrigeration specialists. The work must be carried out in compliance with the rules of refrigeration engineering.

3.3.7 Safety devices

The spring case prevents access to the tension springs. Access is only permitted for adjustment of the tension springs and for maintenance purposes.

Locks on the wheels. The locks must be engaged when the stacking equipment is stationary to prevent the stacking equipment from rolling away out of control.

4 Transport

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.

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

Risk of crushing

Persons may be crushed by stacking equipment rolling away out of control.

- Never allow the stacking equipment to roll away unattended.
- Only transport the stacking equipment up or down an incline if you can control it. If necessary, seek assistance from a second person.
- Only park the stacking equipment on level surfaces.
- Each time you park the stacking equipment, secure it against rolling away with both locks.

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

Release the locks.

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.

Assembly 5



(I) CAUTION

Risk of injury

The pretensioned holder or the platform for baskets or trays may spring up and injure persons.

- Support the holders before mounting the platform for baskets or trays.
- Do not push down on the holders with your hands.

The basic unit for stacking equipment is supplied partially assembled. Use the following steps to mount the platform on the basic unit for stacking equipment.

Tab. 1: Required tools

Tool	Size	Quantity
Nut	M6	8



Tool	Size	Quantity
~	10	1

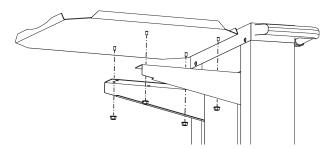


Fig. 4: Assembly of the platform for baskets or trays

- 1. Select the required components.
- 2. Support the holders prior to assembly.
- Place the platform for baskets or trays on the base unit for stacking equipment as shown in the figure.
 - → The threaded bolts are seated in the pre-drilled holes.
- 4. Tighten the bolts.
 - You have bolted the platform for baskets or trays to the basic unit for stacking equipment.

6 Commissioning



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:

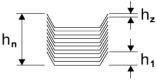
- Packaging and foils in the (yellow) recycling bin.
- Cardboard boxes and paper in the paper recycling bin.
- **1.** Check the functions, paying particular attention to the lock.
- 2. Adjust the tension springs to the items.
- 3. Clean the stacking equipment thoroughly before first use.
 - The stacking equipment is ready for commissioning.



Calculating the capacity

It is possible to calculate how many items stacking equipment can hold.

Step 1	The intermediate stack height $h_{\boldsymbol{z}}$ of the items can be calculated using the
	following formula. Measure any missing values.



Formula	h _z = intermediate stack hei	ght $h_z = ((h_n - h_1)/(n-1))$
	h _n = height between n item	s
	h₁ = height of 1 item	
Example	h _n = 120 mm	$h_z = ((120 - 20) / (11 - 1)) = 10$
	h ₁ = 20 mm	
Step 2	The capacity of the stackin lowing formula	g equipment can be calculated using the fol-
Formula	h _z = intermediate stack hei	ght $Capacity = [((h_{st} - h_1) / h_z) + 1] \times n$
	h_{st} = lifting height of the pla	at-
	form for baskets or trays	
	h ₁ = height of 1 item	
	n = number of items on the	2
	platform for baskets or tray	vs.
	(not stacked)	
Example	h_{st} = 458 mm	Capacity = $[((458 - 20) / 10) + 1] \times 3$
	$h_1 = 20 \text{ mm}$	Capacity = 132 items
	n = 3	(44.8 was rounded down to 44)

Check the tension spring setting on the OKO

- 1. Place 2 baskets with a normal load on the platform for baskets.
 - → The platform for baskets will sink.
- 2. Measure the distance between the top edge of the baskets and the top edge of the spring case.

Distance	< 30 mm	30 to 50 mm	> 50 mm
Adjustment	Distance too small: Unhook the tension springs	Correctly adjusted	Distance too large: Hook on the tension springs

Check the tension spring setting on the OTA

- 1. Place 20 trays on the platform for trays.
 - → The platform for trays will sink.



2. Measure the distance between the top edge of the tray and the top edge of the spring case.

Distance	< 30 mm	30 to 50 mm	> 50 mm
Adjustment	Distance too small: Unhook the tension springs	Correctly adjusted	Distance too large: Hook on the tension springs



CAUTION

Risk of injury

Sharp edges and tension springs may cause injury when hooking and unhooking the tension springs.

- Wear protective gloves.

The tension springs in the spring case ensure that the platform for baskets or trays is lowered evenly when items are placed on the platform for baskets or trays such that the top edge of the item remains at a constant height. The number of springs hooked on must be adjusted to the total weight of the items.

Opening the spring case

- 1. Remove the items from the platform for baskets or trays.
 - → The loading platform is in the starting position.
- 2. Remove the marked screws [1].



Fig. 5: Position of the screws



Fig. 6: Remove the rear panel

- Lift the rear panel slightly [2]. Use a screwdriver to help if necessary.
- 4. Tilt the rear panel as shown in the figure [3].
- **5.** Pull the rear panel out in a downward direction [4].
 - The spring case is open and the tension springs are freely accessible.

NOTICE

Damage to the guide elements

The tension springs must be hooked on symmetrically. If the tension springs are only hooked on one side, the platform for baskets or trays will be damaged.

- Hook or unhook the tension springs equally on the left and right.
- **6.** Always unhook the tension springs from the bottom. Make sure that the tension springs are symmetrically distributed.



- 7. Check the adjustment of the tension springs.
- 8. Remove the items from the guide basket.
- 9. Repeat the steps until the tension springs are correctly adjusted.
 - The tension springs are correctly adjusted.
- 10. Close the rear panel of the spring case.
- 11. Screw the screws back in.

Operation



CAUTION

Risk of injury

The pretensioned platform for baskets or trays can push up objects very quickly and injure persons.

- Only load the platform for baskets or trays with the approved items - never push it with your hands.
- You should also keep an eye on untrained persons.



A CAUTION

Risk of injury

If you load the platform for baskets or trays manually, the tension springs will be visible. The tension springs and guide elements present a risk of injury.

- Only load the platform for baskets or trays with the approved items - never push it with your hands.
- Never reach into the tension springs or the guide elements.
- You should also keep an eye on untrained persons.



NOTICE

Damage to the locks

If the locks are engaged when the transport cart is moving, the functioning of the locks will be impaired.

Only engage the locks when the transport cart is stationary.



7.1 Moving the cart



🔼 WARNING

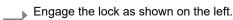
Risk of crushing

Persons may be crushed by stacking equipment rolling away out of control.

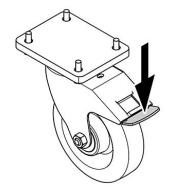
- Never allow the stacking equipment to roll away unattended.
- Only transport the stacking equipment up or down an incline if you can control it. If necessary, seek assistance from a second person.
- Only park the stacking equipment on level surfaces.
- Each time you park the stacking equipment, secure it against rolling away with both locks.

Engaging the locks

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



→ The wheel cannot turn or swivel.



Move the transport cart using the handle



CAUTION

Risk of injury

Items on the base plate can slip out and injure bystanders when the stacking equipment is moved.

- Place the items on the platform for baskets or trays.
- Remove all items from the base plate.

When moving the stacking equipment, do not place any items on the base plate.

- 1. Release the locks.
- 2. Move the stacking equipment with both hands on the handles.
- 3. Engage the locks when the stacking equipment is stationary.



Loading with items



CAUTION

Risk of injury

If stacking equipment is overloaded, objects may fall or be ejected upwards and injure persons.

- Do not load the platform for baskets or trays any higher than the upper edge of the spring case.
- Only load the platform for baskets or trays with the approved items - never push it with your hands.
- You should also keep an eye on untrained persons.

You can load the items onto the stacking equipment.

- 1. Do not exceed the permitted payload when loading the platform for baskets or trays and do not stack items any higher than the upper edge of the spring case.
- 2. Place the items down flat from above.
- 3. Load the platform for baskets or trays evenly.
- 4. Watch out for children and untrained persons who are unaware of the dangers involved in handling the transport cart.

7.3 Dispensing items

You can unload the items from the stacking equipment.

- 1. Lift out the items.
- 2. Load the platform for baskets or trays evenly.
- 3. Watch out for children and untrained persons who are unaware of the dangers involved in handling the transport cart.

Care and cleaning 8

8.1 Cleaning intervals

Interval	Maintenance work	Personnel
After each use and according to the in-house hygiene concept	Clean the stacking equipment	Operating staff
As needed and according to the in-house hygiene concept	Disinfect the stacking equipment	Operating staff



8.2 Permissible cleaning types

Cleaning type		Definition of the cleaning operation	Approval for open tray dispensers/open sided basket dispensers
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:	×
		Do not spray into the bearings	
High-pressure/	High-pressure	Cleaning the surfaces:	•
steam cleaning	≤ 200 bar	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:	*
	_100 0	■ max. 30-90 seconds	
		Short exposure time for individual sections	
		Do not spray into the bearings	



8.3 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	V
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	V
■ 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	

8.4 Material compatibility

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

Stainless steel Housing, interior, top PE 500 (polyethylene) Bumper strips, shutter guide Copper Piping for refrigerant Aluminium Heat exchanger, condenser	Material	Component
Copper Piping for refrigerant	Stainless steel	Housing, interior, top
	PE 500 (polyethylene)	Bumper strips, shutter guides
Aluminium Heat exchanger, condenser	Copper	Piping for refrigerant
	Aluminium	Heat exchanger, condenser

8.5 Manual cleaning

- 1. Clean the transport cart after each use and according to the in-house hygiene concept.
- 2. For wet cleaning, use a soft cloth or an uncoated sponge.
- 3. Use degreasing liquid cleaners.
- **4.** Rinse so that all detergents and disinfectants are completely removed.
- **5.** Dry surfaces after cleaning.

8.6 Disinfecting

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



Damage to property

High concentrations of disinfectant can cause corrosion damage.

Follow the instructions of the disinfectant manufacturer.



Maintenance and repair 9



A CAUTION

Risk of injury

The pretensioned platform for baskets or trays can push up objects very quickly and injure persons.

- Only load the platform for baskets or trays with the approved items - never push it with your hands.
- Watch out for persons nearby.



A CAUTION

Risk of injury

If you load the platform for baskets or trays manually, the tension springs will be visible. The tension springs and guide elements present a risk of injury.

- Only load the platform for baskets or trays with the approved items - never push it with your hands.
- Never reach into the tension springs or the guide elements.
- You should also keep an eye on untrained persons.

9.1 **Maintenance intervals**

Interval	Maintenance work	Personnel Operator	
daily	Carry out a visual inspection of the entire unit.		
annually	ally Check the entire transport cart for distortion and mechanical damage.		
	Check the effectiveness of the locks.		
	Check the mechanical strength of the wheels.		

9.2 **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
Stacking equipment pulls to the left or right	Wheel bearings damaged	Replace damaged wheels	Maintenance engi- neer
Wheels do not turn easily	Wheel bearings damaged	Replace damaged rollers	Maintenance engi- neer
Castor lock no longer working	Lock worn out	Replace lock	Maintenance engi- neer



Fault description	Cause	Remedy	Personnel
Running noises made by wheels	Wheel bearings damaged	Replace worn wheels	Maintenance engi- neer
Platform for baskets or trays does not raise up	One or more tension springs are broken	Replace broken tension springs	Operating staff
	Too few tension springs hooked on	Adjust the tension spring settings	Operating staff
Platform for baskets or trays does not lower	Too many springs hooked on	Adjust the tension spring settings	Operating staff
	Platform for baskets or trays is tilted	Take the platform for bas- kets or trays out of oper- ation. Inform the mainte- nance technician	Maintenance engi- neer
Platform for baskets or trays moves sluggishly	Guide of the platform for bas- kets or trays is defective	Take the stacking equipment out of operation. Contact the maintenance technician	Maintenance engineer

9.3 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.

9.4 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.
- Clean the transport cart thoroughly before putting it back into operation.

10 Disposal



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

Have the transport cart disassembled and disposed of by recycling companies. All the materials are recyclable.

Take the components to a designated disposal centre.

