FTZ-MAXI-50



GB | Operating Instructions



Please note that the product may not be used / put into operation without these operating instructions in the national language. If you did not receive operating instructions in your national language with the delivery of the product, please contact us. In countries of the EU / EFTA we will send them to you free of charge. For countries outside the EU / EFTA, we will be pleased to provide you with an offer for an operating manual in the national language if the translation cannot be organised by the dealer/importer.



Contents

1	ļ	EC-	Declaration of Conformity / UKCA-Declaration of Conformity	3		
2		Saf	ety	4		
	2.1		Safety symbols			
	2.2		Explanation of basic concepts	4		
	2.3		Definition skilled worker / specialist	4		
	2.4		Safety Marking	5		
	2.5		Personal safety requirements	6		
	2.6		Protective equipment	6		
2.7			Accident prevention	6		
	2.8		Function Control			
	2.	8.1	General	6		
	2.9		Safety procedures			
	2.9	9.1	General	7		
	2.9	9.2	Carrier / Lifting device	7		
3		Ger	General			
	3.1		Authorized use	8		
	3.2		Survey and construction	10		
	3.3		Technical data	10		
4	ļ	Inst	tallation	11		
	4.1		Mechanical connection			
	4.	1.1	Lifting eye / Suspension bolt			
	4.	1.2	Load hooks and lifting tackle			
	4.	1.3	Rotators (optional)	11		
	4.	1.4	Fork sleeves (optional)	12		
5		Adjustments				
	5.1	•	Adjustment of the opening range			
	5.2		Gripping ranges			
	5.3		Adjustment of the height adjustable support (accessory)	15		
6		Operation				
	6.1	•	Operating for devices with automatic release			
7	ı	Mai	ntenance and care	18		
-	7.1		Maintenance			
		1.1	Mechanics			
	7.2		Trouble shooting			
	7.3		Repairs			
	7.4		Safety procedures			
	7.5		Hints to the type plate			
	7.6		Hints to the renting/leasing of PROBST devices			
8	I	Dis	posal / recycling of devices and machines			

We hereby reserve the right to make changes to the information and illustrations in the operating instructions.



1 EC-Declaration of Conformity / UKCA-Declaration of Conformity

Description: Grab for prefabricated concrete products FTZ

Type: FTZ-MAXI-50
Order number: 53100363

Manufacturer: Probst GmbH

Gottlieb-Daimler-Straße 6

71729 Erdmannhausen, Germany

info@probst-handling.de www.probst-handling.com

Importer: Probst Ltd

Unit 2 Fletcher House Stafford Park 17

Telford Shropshire TF3 3DG, United Kingdom

www.probst-handling.co.uk sales@probst-handling.co.uk



The machine described above complies with the relevant requirements of the following EU directives: The object of the declaration described above is in conformity with the relevant UK-Regulations and UK-Guidelines:

EC-machinery directive 2006/42/EC (*Reference: OJ L 157, 09.06.2006*)

UK-Regulation: Supply of Machinery (Safety) Regulations 2008 (SI 2008 No. 1597)

The following standards and technical specifications were used:

DIN EN ISO 12100

Safety of machinery - General principles for design - Risk assessment and risk reduction

UK-Regulation: BS EN ISO 12100-1:2003+A1:2009

DIN EN ISO 13857

Safety of machinery - safety distances to prevent hazard zones being reached by upper and lower limbs.

UK-Regulation: BS EN ISO 13857:2019

Authorized person for EC-documentation:

Name: Jean Holderied

Address: Probst GmbH; Gottlieb-Daimler-Straße 6; 71729 Erdmannhausen, Germany

Authorized person for UK-documentation:

Name: Nigel Hughes

Address: Probst Ltd; Unit 2 Fletcher House; Stafford Park 17; Telford Shropshire TF3 3DG, United Kingdom

Signature, information to the subscriber:

Erdmannhausen, 31.08.2023.....

(Eric Wilhelm, Managing Director)



2 Safety

2.1 Safety symbols



Danger to life!

Identifies imminent hazard. If you do not avoid the hazard, death or severe injury will result.



Hazardous situation!

Identifies a potentially hazardous situation. If you do not avoid the situation, injury or damage to property can result.



Prohibition!

Identifies imminent a prohibition. If you do not avoid the prohibition, death and severe injury, or damage to property will result.



Important information or useful hints for the usage.

2.2 Explanation of basic concepts

Gripping range:	 specify the minimum and maximum product measurements of the gripping good, which can be gripped with this device.
Gripping good(s):	is the product, which will be gripped or transported.
Opening width:	 consists of the gripping range and the measure to drive over the gripping good. gripping range + measure to drive over the gripping good = opening width
Immersion depth:	 is the maximum gripping height of gripping goods, conditional of the height of the gripping arms of the device.
Device:	is the description for the gripping device.
Product dimensions:	 Are the dimensions of the gripping good (e.g. length, breadth, height of the product).
Dead weight:	is the own weight (without gripping good) of the device.
Carrying capacity/working load limit (WLL*):	 specify the maximum possible load of the device (for lifting of gripping goods). *= WLL → (english:) Working Load Limit
Area in proximity to the ground:	 the gripping good must be lowered to just above the ground (approx. 0.5 m) immediately after being picked up (e.g. from a pallet or from a truck). For transport, lift the gripping good only as high as necessary (recommendation approx. 0.5 m above the ground).

2.3 Definition skilled worker / specialist

Only skilled workers or specialists are allowed to carry out the installation-, maintenance-, and repair work on this device!

Skilled workers or specialists must have for the following points (if it applies for this device), the necessary professional knowledge.

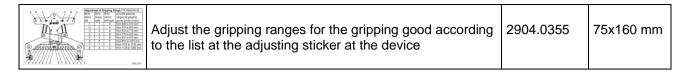
- for mechanic
- · for hydraulics
- for pneumatics
- for electrics



2.4 Safety Marking

PROHIBITION SIGN				
Symbol	Meaning	Order-No.:	Size:	
\$200 m/s	The transportation of non rectangular goods is not allowed!	29040213 29040212 29040211	30 mm 50 mm 80 mm	
	It is not allowed to be under hanging loads. Danger to life!	29040210 29040209 29040204	30 mm 50 mm 80 mm	
	Do not lift any components off-centre (always in centre of gravity).	29040216 29040215 29040214	30 mm 50 mm 80 mm	
WARNING SIGN				
Symbol	Meaning	Order-No.:	Size:	
	Danger of squeezing the hands.	29040221 29040220 29040107	30 mm 50 mm 80 mm	
REGULATORY S	IGN			
Symbol	Meaning	Order-No.:	Size:	
	The manual guiding of the device is only allowed at the red handles.	29040227 29040226 29040225	30 mm 50 mm 80 mm	
	Each operator must have read and understood the operating instructions (and all safety instructions).	29040665 29040666 29041049	30mm 50 mm 80 mm	
OPTIONAL	Be sure that the fork sleeves are mechanically fixed (with locking screw and safety chain or rope) to the lifting device/carrier.	29040223 29040222	50 mm 80 mm	





2.5 Personal safety requirements



Each operator must have read and understood the operating instructions (and all safety instructions). Only qualified, authorized personal is allowed to operate the device and all devices which are connected (lifting device/carrier).



The **manual guiding** is **only** allowed for devices **with handles**. Otherwise there is a risk of injury to the hands!

2.6 Protective equipment

The protective equipment must consist, according to the safety regulations of the following parts:

- Protective clothing
- Safety gloves
- · Safety shoes

2.7 Accident prevention



- The workplace has to be covered for unauthorized persons, especially children.
- Caution at thunderstorm danger of lightning!
 Depending on the intensity of the thunderstorm, stop working with the device if necessary.



- The workplace must be sufficiently illuminated.
- Be careful with wet, frozen, iced and dirty building materials! There is a danger of the gripping material slipping out. → DANGER OF ACCIDENT!

2.8 Function Control

2.8.1 General



- Before every usage of the device check the functions and the working condition.
- Maintenance and lubrication are only permitted when device is shut down!



- Do not use the device, until all faults which can cause safety hazards are removed.
- If there are any cracks, splits or damaged parts on any parts of the device, immediately stop using
 it.



- The operating instructions must be available at the workplace every time.
- Do not remove the type plate of the machine.
- Unrecognisable information signs (such as regulatory or prohibition signs) must be replaced.



2.9 Safety procedures

2.9.1 General



- The use of the device is only permitted in proximity to the ground.
 Do not swing it over people heads.
- The stay under lifted load is forbidden. Danger to Life!



The manual guiding of the device is only allowed at the handles.



- While using the device the stay of persons in the working area is forbidden. Except it is indispensable, caused of the way of using the device, e.g. if the device must be leaded by hand.
- Jerky lifting or lowering of the device with or without load is prohibited, as well as driving fast with
 the carrier device/lifting device over uneven terrain! In general, with the load lifted, drive with the
 lifting equipment (e.g. excavator) only at walking speed avoid unnecessary vibrations.
 Danger: Load could fall down or load handling equipment could be damaged!



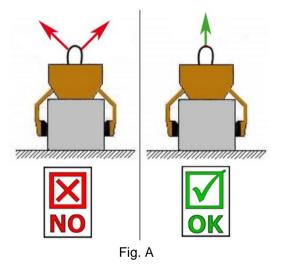
- Do not lift any components off-centre (always in centre of gravity), because that could fall down.
- The device should not be opened if the opening path of the gripping arm is blocked by a resistance (e.g. other concrete blocks or the like)!



- The operator is not allowed to leave the control unit as long as the device loaded with load. The load must always be in the range of vision of the operator.
- Never exceed the carrying capacity/working load limit (WLL) and the nominal width/gripping range of the device.



- Do not pull out stuck or tightened loads with the device.
- Never pull or drag loads sideways. Otherwise parts of the device could be damaged. (see Fig. A →)



2.9.2 Carrier / Lifting device



- The used carrier/lifting device (e.g. excavator) have to be in good, safe working condition.
- Only authorized and qualified persons are allowed to operate the carrier/lifting device.
- The operator of the carrier/lifting device must have all the necessary qualifications.



 Never exceed the maximum allowable carrying capacity/working load limit (WLL) of the carrier/lifting device and the lifting gear.



3 General

3.1 Authorized use

The device (*FTZ-MAXI-50*) is universal usable for gripping and moving clean and square customary prefabricated concrete products, with unpolluted gripping surface, like concrete wall units, steps, kerbs, and so on. Connected with lifting equipment e.g. a excavator or a crane.

This device is series-produced equipped with the following elements:

- universally adjustable gripping range.
- suspension bolt for lifting tackle (crane-hook, belt etc.) at support frame/lifting device
- automatic release for the fully automatic switch over from "full" to "empty".
- exchangeable rubber grippers.



<u>ATTENTION:</u> The use of this device is only permitted in proximity to the ground (→ chapter "Safety at work" and "Explanation of basic concepts").



Only stone elements with parallel and plane surface are allowed to be picked-up and handled. Because the gripping good could **fall down**.



NOT ALLOWED ACTIVITIES:

Unauthorized alterations of the device and the use of any self-made additional equipment could cause danger and are therefore **forbidden**!

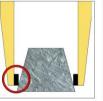
Carrying capacities / working load limits(WLL) of the device must not be exceeded and nominal widths/gripping ranges must not be exceeded or fallen below.

All unauthorized transports with the device are strictly prohibited:

- Transport of people and animals.
- Gripping and transporting of other loads and materials than described in this operating instruction.
- Never suspend any goods with ropes, chains or similar at the device, except at the designated lifting eyes/-bolts.
- Gripping of gripping goods with packaging foil, because they could fall down.
- Gripping of gripping goods with surfaces that reduce the coefficient of friction (e.g., abrasive, treated, dirty, frozen, coated, painted surfaces), as this causes a reduction in the coefficient of friction between the grippers and the gripping goods → Danger of slipping!

Remedy: In case of dirt of any kind, it is absolutely necessary to clean the grippers and the surface of the products in the area of the grippers **before each** gripping process!

- Gripping of gripped goods, which can deform or break due to the clamping force of the gripping device!
- Gripping of goods which show visible damage, or which may break due to their own weight.
- Gripping and transporting of non-rectangular and round gripping goods, because they could fall down (see figure to the right).
- Transportation of material with "feet", "bellies" and "blind spacers".













- The device is only designed for the use specified in this documentation.
- Every other use is not authorized and is forbidden!
- All relevant safety regulations, corresponding legal regulations, especially regulations of the declaration of conformity, and additional local health and safety regulations must be observed.



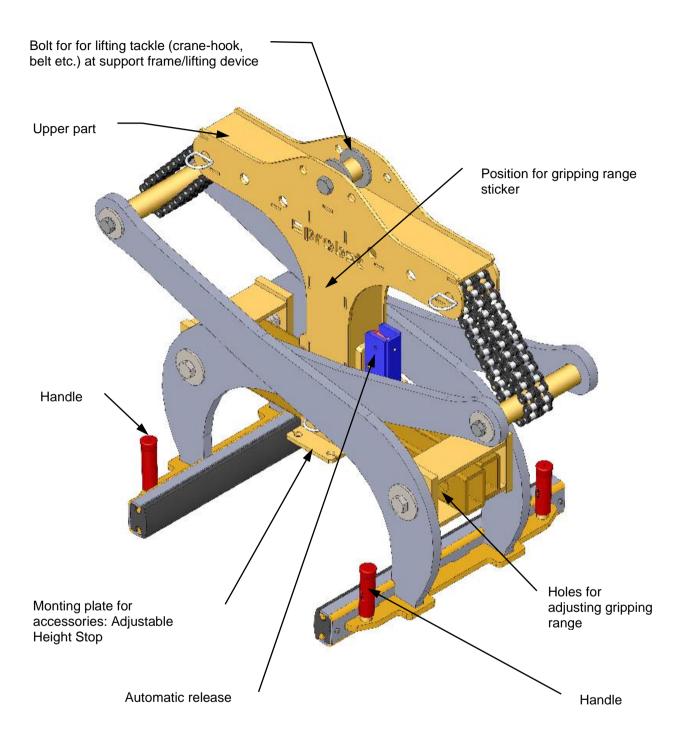
Prior to every operation the user **must** ensure that:

- The equipment is suited to the intended operation
- the functioning and the working condition of the equipment is examined
- the load is suitable to be handled.

Any doubts about instructions should be raised with the manufacturer prior to use.



3.2 Survey and construction



3.3 Technical data

The exact technical data (carrying capacity / working load limit (WLL), dead weight, etc.) are listed on the type plate.



4 Installation

4.1 Mechanical connection

Use only original accessories, in case of doubt consult the manufacturer.



Take care that the **carrying capacity / working load limit** (WLL) of the lifting device/carrier is **not exceeded**, through the load of the device, the optional attaching devices (turning device, fork sleeves, crane boom etc.) and the additional load of the gripping goods!

Gripping devices always have to be gimballed, so they can swing freely in any position.



In no case it is allowed to mount gripping devices with lifting devices/carriers in a rigid way! Break of the suspension may occur within short time. Death, severe injuries and material damage can result!



When using the device on optional attachments (such as fork sleeves, crane boom, etc.), it cannot be excluded, due to the lowest possible construction of the total device (to avoid loss of lifting height), that the device may collide with adjacent components if the device is suspended in an oscillating motion and unfavourable positioning during travel movements of the carrier device. This should be avoided as far as possible by positioning the device appropriately and in a sensible driving style. Damage resulting from this will not be regulated within the scope of the warranty.

4.1.1 Lifting eye / Suspension bolt

The device is equipped with a lifting eye / suspension bolt and can be mounted on various carrier / lifting devices.



Take care that the lifting eye / suspension bolt is safely joined with the lifting tackle (e.g. crane hook, belt) and cannot slide down.

4.1.2 Load hooks and lifting tackle



The device is attached to the carrier/lifting device with a load hook or a suitable lifting tackle.

Ensure that the single chains strands are not twisted or knotted.

Attaching the device to the lifting device/carrier, take care that all local safety regulation is observed.

4.1.3 Rotators (optional)



When using rotators, a free-wheel throttle valve must be installed.

In order to prevent a sudden speedup and stopping the rotational movements, as this may **damage** the device within a short time.



4.1.4 Fork sleeves (optional)

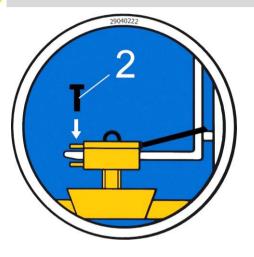


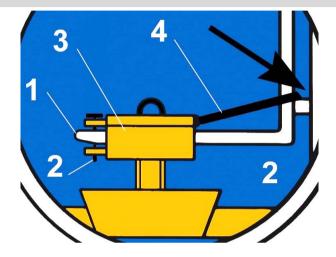
In order to connect the forklift truck and the fork sleeve (3), the forklift truck forks (1) are inserted into the fork sleeve (3).

The forks (1) are locked either by using the locking screws (2), which are inserted through a hole in the forks (1), or by using a chain or rope, which must be placed through the eyelet on the fork sleeve (3) and around the fork carrier ($\mathbf{2}$).



This connection must be made, otherwise the fork sleeve may slip off the forklift forks during forklift handling. **DANGER OF ACCIDENT!**







5 Adjustments

5.1 Adjustment of the opening range

Before the product can be lifted and transported, the gripping range has to be adjusted to the dimensions of the product (see the following adjustment sticker).

Otherwise is not ensured that the clamping force for the secure gripping of the gripping good is adequate and it could slide down!

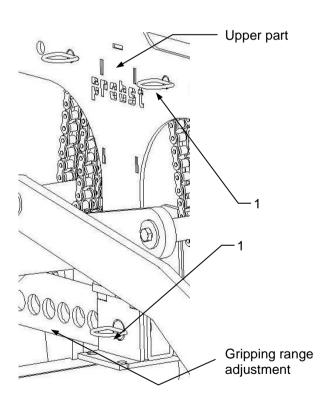


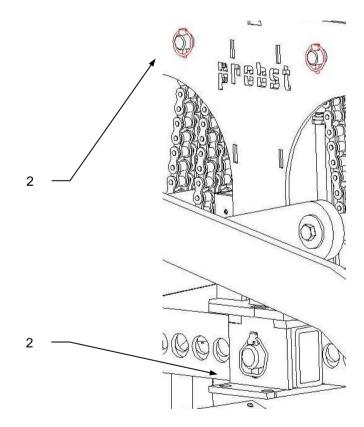
- The adjustment of the gripping range may <u>never</u> take place on both sides at the same time. Always adjust the gripping range first to the one and then on the other side.
- Release bolt with half ring (1), through pulling out of the splint(2).
- Pull the bolt with half ring (1) at the upper part and the opening range adjustment. Slide the rectangular tubes apart, until the opening range is about 5 cm greater than the product.
- Insert the bolt with half ring (1) again and safe it with the splint (2).
- The adjustment of the gripping range has to follow general **symmetrical**.

 That means, it must be used in each case the same adjustable hole with both rectangular tubes.



- <u>Caution</u> while adjusting of the gripping range. There is a danger of injuring the hands!
 Use safety gloves!
- Defective safety elements (splints) must be replaced absolutely!



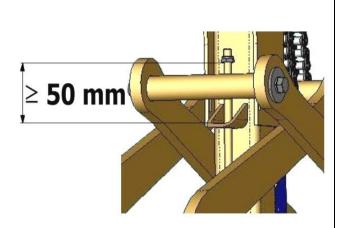


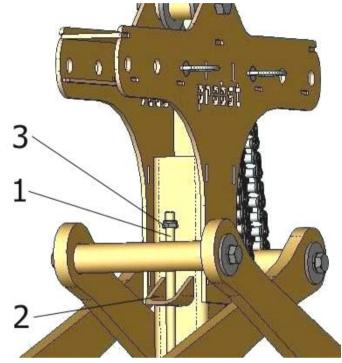




The gripping range must be adjusted always in the right way (look adjustment of the gripping width). Otherwise there is no warranty that the tension force is sufficient to grip the gripping good safety and there is no danger, that it will be <u>slide down</u>.

At the adjusting of the gripping range must be accounted, that the lower nut on the threaded rod (1) do not drive on block during the gripping action (lifting of a gripping good). That means, to keep a **minimum** distance from **50 mm** between the nut (3) and the bottom part (2). Otherwise is the buffer of the tension force to low.







5.2 Gripping ranges

Adjusting sticker for gripping range

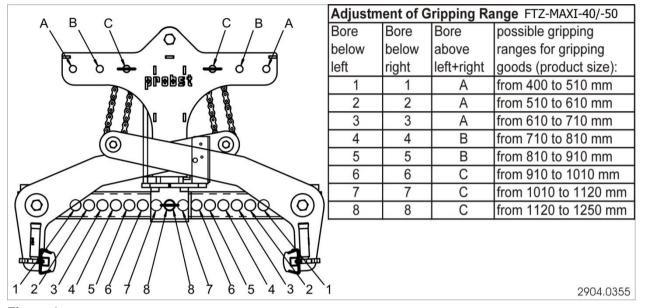


Figure 1



It is not allowed to cross over or undercut the gripping ranges!

5.3 Adjustment of the height adjustable support (accessory)



When using the device in batch operation, for gripping of single stone slabs (batched one upon the other), we advise to use the accessory "height adjustable support" HVA-FTZ/TSZ (see figure). Therefore, the inside height must not always be adjusted again for gripping goods with the same dimensions.



When picking up in batch operation the top stone slab may only be lifted!

- The height adjustable support (B) is attached to the mounting plate (A)
- Adjust the height adjustable support (B) with the adjusting screws and make sure that both parts have the same height and that the rubber gripper bars are positioned in the middle area of stone thickness.

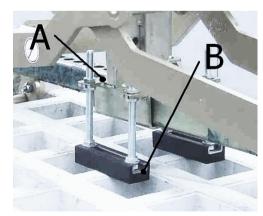


Fig. 1



6 Operation

6.1 Operating for devices with automatic release

- The device is connected to the lifting equipment/carrier (e.g. excavator).
- Before lifting the device, the gripping range has to be adjusted.
- The device is placed over the product, set down, the device closes round the product and it can be lifted.
- Set down on the ground again, the device opens automatically, the automatic release locks it into position so that the device can be lifted without closing up.
- Placed over the next product, the automatic release disengages itself and the product can be lifted. The device therefore is a ONE-MAN-MACHINE.

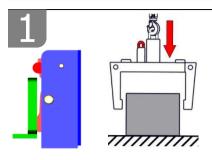


Shut-down the device without lifting equipment/carrier only on even ground. The gripping arms must be opened enough, to ensure a secure standing of the device. Otherwise there is a danger of overturning!

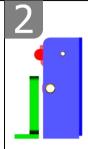


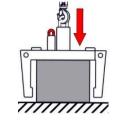
The device is equipped with an automatic release, that means the OPENING and CLOSING of the gripping arms results through the set down and lifting of the device.

Pictures of the positions of the automatic release:

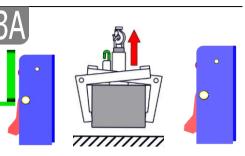


- Device is lifted through the lifting equipment/carrier
- Gripping arms are opened

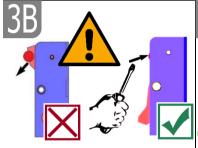




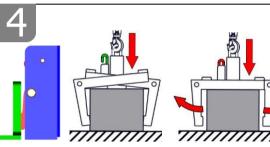
- Device is set up on the gripping good
- · Gripping arms are opened



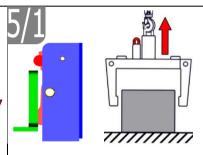
- Device is lifted through the lifting equipment/carrier
- Gripping good is clamped and can be transported to the destination



 With faulty switching, the change-over switch must be pushed back manually (e.g. with a screwdriver)



- Device is set down with the gripping good (on the ground)
- · Gripping arms are opening



- Device is lifted through the lifting equipment/carrier
- Gripping arms are opened (laydown position of the device on the ground)



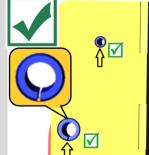
1) Otherwise there may be faulty switching and when setting down the load this can cause deformation or damage of the automatic release!

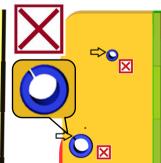
The jerky lifting and lowering of the device with and without load. e.g. caused through driving fast with the lifting equipment/carrier over uneven grounds is **forbidden**



When replacing a defective automatic release, it is essential to ensure that the slots of the two clamping pins **always** point downwards.

The position of the slots **must not be** above or center, otherwise there is a risk that the automatic release may jam when switching!







7 Maintenance and care

7.1 Maintenance



To ensure the correct function, safety and service life of the device the following points must be executed in the maintenance interval.

Used **only original spare parts**, otherwise the warranty expires.



All operations may only be made in closed state of the device! For all operations you have to make sure, that the device will not close unintended. **Danger of injury!**

7.1.1 Mechanics

MAINTENANCE PERIOD	Work to be carried out
Initial inspection after 25 operating hours	 Check or retighten all fixing screws (may only be carried out by a qualified person).
Every 50 operating hours	 Retighten all fixing screws (make sure that the screws are retightened according to the valid tightening torques of the corresponding strength classes). Check all existing safety elements (such as folding pins) for proper function and replace defective safety elements. → 1) Check all joints, guides, pins and sprockets, chains for proper function, readjust or replace if necessary. Check gripper jaws (if present) for wear and clean, replace if necessary. All existing sliding guides, rack gears and joints of moving parts or machine components must be greased / lubricated to reduce wear and for optimum movement sequences (recommended grease: Mobilgrease HXP 462). Lubricate all grease nipples (if present) with grease gun.
At least 1x per year (shorten the inspection interval in case of harsh operating conditions)	 Inspection of all suspension parts, as well as bolts and brackets. Inspection for cracks, wear, corrosion and functional safety by an expert.

AUTOMATIC-RELEASE



Never grease or oil the automatic-release!

Clean with high-pressure cleaner when the automatic-release is dirty.



7.2 Trouble shooting

ERROR	CAUSE	REPAIR	
The clamping-power is not big enough, the load is slipping out			
(optional)	The grippers are worn	Replace the grippers	
(optional)	The maximum load is exceed	Reduce the weight of. the load	
(Adjustment of the gripping range) (optional)	The actual opening width is not correct	Adjust the gripping range according to the load you want to transport	
(Property of material)	The surface of the material is dirty or the material is not suitable / allowed for this device.	Check the surface of the material or ask the manufacturer, if you the material is allowed for this device.	
Unbalanced load			
	The device is not loaded symmetrically	Adjust the position of the load	
(Adjustment of the gripping range) (optional)	The adjustment of the gripping range is not symmetrical.	Correct the adjustment of the gripping range	
Automatic release does not work			
		Clean automatic release with high pressure-cleaner	
mechanical (optional)	Automatic release does not work	Correct faulty switching (→see chapter "Picture of the automatic release")	
		Change the inset of the automatic release	

7.3 Repairs



Only persons with the appropriate knowledge and ability are allowed to repair the device. Before the device is used again, it **has to be** checked by a qualified person or an expert.



7.4 Safety procedures



- It is the contractor's responsibility to ensure that the device is checked by an expert in periods of max. 1 year and all recognized errors are removed (→ DGUV norm 100-500).
- The corresponding legal regulations and the regulations of the declaration of conformity must be observed!
- The expert inspection can also be done by the manufacturer Probst GmbH.
 Contact us at: service@probst-handling.de
- We recommend affixing the inspection sticker ""Sachkundigenprüfung / Expert inspection" in a clearly visible place (order no.: 2904.0056+Tüv sticker with year number) after the inspection has been done.



The check by an expert must be proved!

Device	Year	Date	Expert	Company



7.5 Hints to the type plate



- Type, serial-number and production year are very important for the identification of your device. If you need information to spare-parts, warranty or other specific details please refer to this information's.
- The maximum carrying capacity/working load limit (WLL) is the maximum load which can be handled with the device. Do not exceed this carrying capacity/working load limit (WLL).
- If you use the device in combination with other lifting equipment (Crane, chain hoist, forklift truck, excavator) consider the deadweight of the device.



Example:

7.6 Hints to the renting/leasing of PROBST devices



With every renting/leasing of PROBST devices the **original operating instructions must be included** unconditionally (in deviation of the user's country's language, the respective translations of the original operating instructions must be delivered additionally)!

8 Disposal / recycling of devices and machines



The product **may only** be taken out of service and prepared for disposal / recycling by qualified personnel. Correspondingly existing **single components** (such as metals, plastics, liquids, batteries/rechargeable batteries etc.) **must** be disposed of/recycled in accordance with the nationally/country-specific applicable laws and **disposal regulations**!



The product must not be disposed of in household waste!

Proof of maintenance



Warranty claim for this machine only apply for performance of the mandatory maintenance works (by an authorised specialist workshop)! After each completed performance of a maintenance interval the included form must be fill out, stamped, signed and send back to us immediately. 1)

		¹⁾ via e-m	nail to service@probst-handling.de / via fax or post
Operator: Device type: Device-No.:		Article -No.: Year of make:	
First inspec	tion after 25 operating hours		
Date:	Maintenance work:		Inspection by company:
	I I I I I I I I I I I I I I I I I I I		Inspection by company: Company Stamp
			\dashv
			4
			_
			Name / Signature
All CO among	the a beauty		
All 50 opera			
Date:	Maintenance work:		Inspection by company:
			Company Stamp
			7
			┨
			Name / Signature
			Inspection by company: Company Stamp
			_
			_
			Name / Signature
			Inspection by company:
			Company Stamp
			7
			_
			╡
			-
			Name / Cimptum
			Name / Signature
Minimum 1x	per vear		
Date:	Maintenance work:		Inspection by company:
Date.	Walltonance work.		Inspection by company: Company Stamp
			-
			-
			_
			_
			Name / Signature
			Inspection by company: Company Stamp
			Company Stamp
			7
			7
			╡
			╡
			Name / Signature
1	1		Traine / Digitatore

