



Operating Instructions

Translation of original operating instructions

Grab for Prefabricated Concrete Products FTZ

FTZ-UNI-15

1 Contents

1	Contents	2
2	EC-Declaration of Conformity	3
3	Safety	4
3.1	Safety symbols	4
3.2	Explanation of basic concepts	4
3.3	Definition skilled worker / specialist	4
3.4	Safety Marking.....	5
3.5	Personal safety requirements	6
3.1	Protective equipment.....	6
3.2	Accident prevention	6
3.3	Function Control	6
3.3.1	General	6
3.4	Safety procedures	7
3.4.1	General	7
3.5	Hydraulic excavator and other carrier	7
4	General.....	8
4.1	Authorized use.....	8
4.2	Survey and construction	10
4.3	Technical data	10
4.4	Installation	11
4.5	Mechanical connection	11
4.6	Load hook and chains	11
5	Adjustments	12
5.1	Adjustment of the gripping range	12
5.2	Adjustment of the threaded rod.....	13
5.3	Gripping ranges	14
6	Operation	15
6.1	Operating for devices with automatic release.....	15
6.2	Picture of the automatic release	15
7	Maintenance and care	16
7.1	Maintenance	16
7.2	MECHANICAL	16
7.3	Trouble shooting	17
7.4	Repairs	17
7.5	Safety procedures	18
7.6	Hints to the type plate.....	19
7.7	Hints to the renting/leasing of PROBST devices	19

2 EC-Declaration of Conformity

Description: Grab for Prefabricated Concrete Products FTZ
Type: FTZ-UNI-15
Order-Nr.: 5310.0256

Manufacturer: Probst Greiftechnik ♦ Verlegesysteme GmbH
Gottlieb-Daimler-Strasse 6
D-71729 Erdmannhausen
info@probst.eu www.probst.eu

Complies with the following provisions applying to it

EC-machinery directive 2006/42/EC

DIN EN ISO 12100

Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

DIN EN ISO 13857

Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)

DIN EN 349

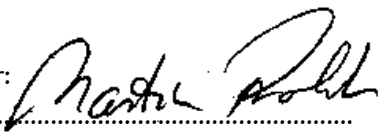
Minimum distance to avoid squeezing any parts of the body (ISO 13854).

Authorized person for EC-dokumentation:

Name: J. Holderied

Address: Probst Greiftechnik ♦ Verlegesysteme GmbH; Gottlieb-Daimler-Str. 6; D-71729 Erdmannhausen

Signature, informations to the subscriber:

Erdmannhausen, 19.08.2014.....

(M. Probst, Managing director)

3 Safety

3.1 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.

3.2 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. <i>$\text{gripping range} + \text{measure to drive over the gripping good} = \text{opening width}$</i>
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.
Load capacity:	specify the maximum possible load of the device (lifting of gripping goods).

3.3 Definition skilled worker / specialist

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

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

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

3.4 Safety Marking

PROHIBITION SIGN

Symbol	Meaning	Order-No.:	Size:
	The transportation of non rectangular goods is not allowed!	2904.0213 2904.0212 2904.0211	30 mm 50 mm 80 mm
	It is not allowed to be under hanging loads. Danger to life!	2904.0210 2904.0209 2904.0204	30 mm 50 mm 80 mm
	Do not lift any components off-centre.	2904.0216 2904.0215 2904.0214	30 mm 50 mm 80 mm

WARNING SIGN

Symbol	Meaning	Order-No.:	Size:
	Danger of squeezing the hands.	2904.0221 2904.0220 2904.0107	30 mm 50 mm 80 mm

REGULATORY SIGN

Symbol	Meaning	Order-No.:	Size:
	The manual guiding of the device is only allowed at the red handles.	2904.0227 2904.0226 2904.0225	30 mm 50 mm 80 mm
	Read operating instructions before operating.	2904.0366 2904.0365	30x57 mm 50x95 mm

3.5 Personal safety requirements



- Each operator must have read and understood the operating instructions.
- Only qualified, authorized personal is allowed to operate the device and all devices which are connected (lifting equipment).
- The manual guiding is only allowed for devices with handles.

3.1 Protective equipment

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

- Protective clothing
- Safety gloves
- Safety shoes

3.2 Accident prevention



- The workplace has to be covered for unauthorized persons, especially children.
- Take care in case of thunderstorm!



- The workplace has to be sufficiently illuminated.
- Take care with handling wet, dirty and not solidified components.



- The working with the device in case of atmospheric editions under 3° C (37,5° F) is forbidden! Because the goods could be fall down caused by dampness or freezing.

3.3 Function Control

3.3.1 General



- Before using 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 data-plates of the machine.
- Unrecognisable information signs must be replaced.

3.4 Safety procedures

3.4.1 General



- The use of the device is only permitted in proximity to the ground. Do not swing it over peoples heads.
- The manual guiding is only allowed for devices with handles.
- 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.



- 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.
- 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**. Because the gripping good could **fall down**. Unchecked movements of the device.



- While using the device be sure that there are no persons in the working area. **Danger to Life!**
- Do not pull out stuck or tightened loads with the device.
- Do not lift any components off-centre, 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)!
- **Never exceed the carrying capacity and the nominal width of the device.**
- **Never** pull or drag loads sideways. Otherwise parts of the device could be damaged. (see Fig. A →)

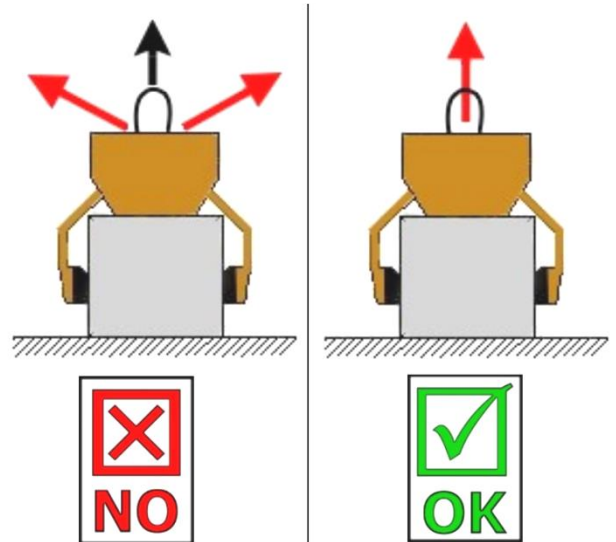


Fig. A

3.5 Hydraulic excavator and other carrier



- Hydraulic excavator and other support frames have to be in good, safe working condition.
- Only authorized and qualified personnel is allowed to operate the excavator and other carrier.
- The operator staff must have all the necessary qualifications.



- **Never exceed the maximum capacity of the hydraulic excavator and other carrier.**

4 General

4.1 Authorized use

The device (**FTZ-UNI-15**) is universal usable for gripping and moving customary prefabricated concrete products, with clean gripping surface; like steps, kerbs (also natural kerbs), as well as “Kassler Bord” (Bus- and Train-profil-stones) and so on. Connected with lifting equipment e.g. a excavator or a crane.

The device (**FTZ-UNI-15**) is universal usable because of the great opening width and a high carrying capacity. Look at the technical data list for details.

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

- universal adjustable opening 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

The opening range of the device (**FTZ-UNI-15**) can be regulated universal over the spring bolt.

The device (**FTZ-UNI-15**) is equipped with a automatic release to switching full automatically from “full onto empty” (grip and to loosen of the gripping goods). That means the opening and closing of the gripper be caused through the set down and the heave of the device.



ATTENTION: The use of this device is only permitted in proximity to the ground.



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



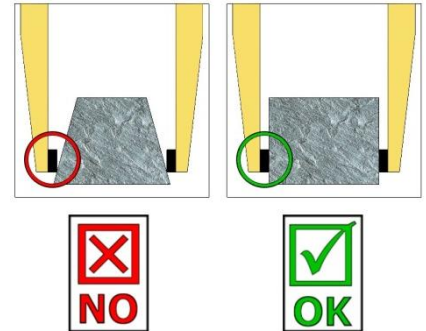
NOT ALLOWED ACTIVITIES:

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

Never exceed the **carrying capacity** and the **nominal width/gripping range** of the device.

All unauthorized transportations with the device are **not allowed**:

- Transportation of people and animals.
- Transportation of other loads and materials than described in this manual.
- Never suspend any goods with ropes, chains or similar at the device.
- Transportation of **non rectangular** and **round** gripping goods, because they could fall down. (see figure to the right). →
- Gripping of gripping goods with **packaging foil**, because they could fall down.
- 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 have to be observed.

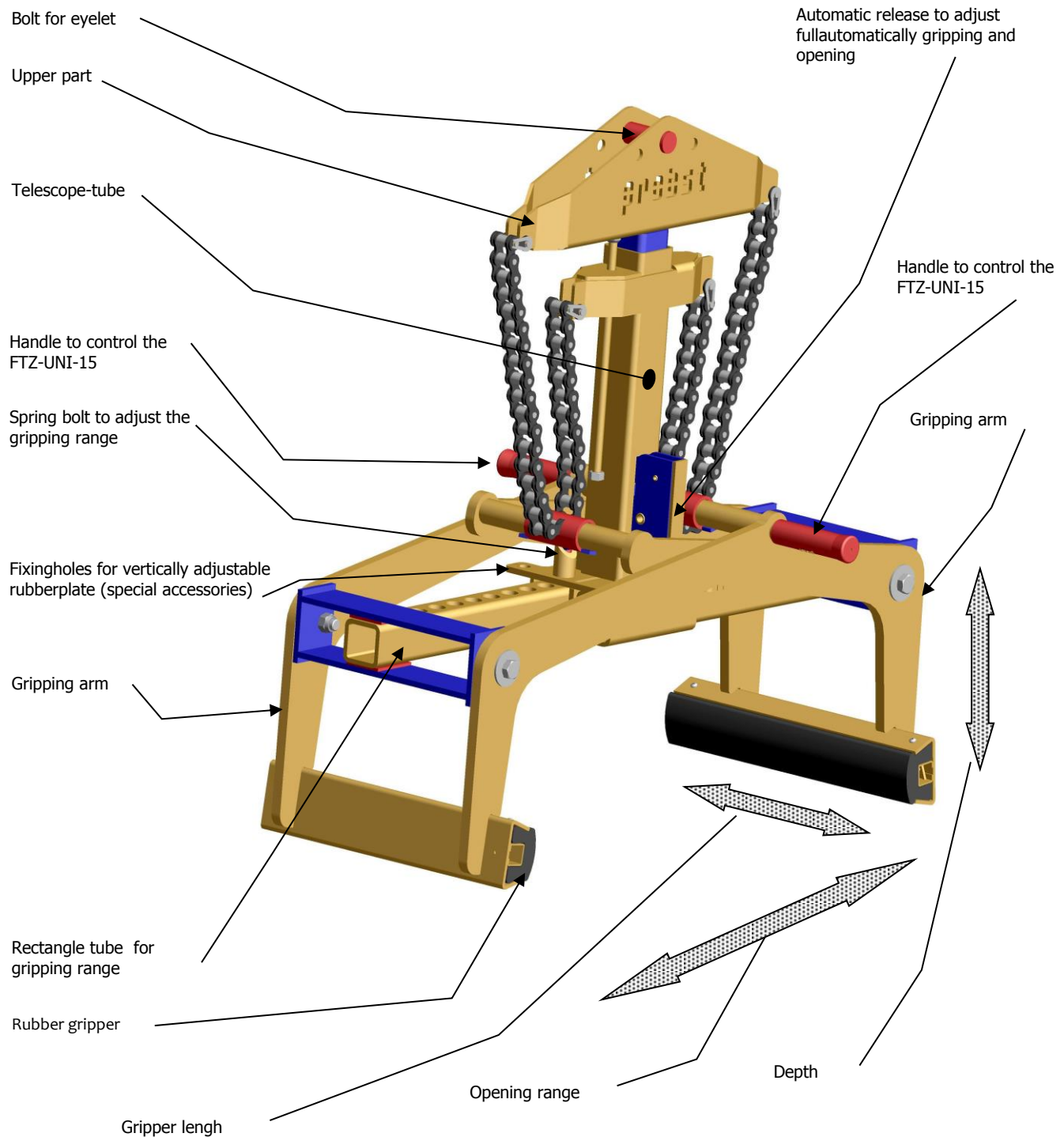


Prior to every operation the user must ensure that:

- the equipment is suited to the intended operation, the functioning and the working condition of the equipment is examined, and the loads are suitable to be handled.

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

4.2 Survey and construction



4.3 Technical data

The exact technical data (carrying capacity, dead weight, etc.) are listed on the type plate.

4.4 Installation

4.5 Mechanical connection

4.6 Load hook and chains



- Fit suspension ring in the load hook of the lifting equipment/carrier.
- **Ensure that the single chains are not twisted and may be easily pulled through the jaws**



- Attaching the device to the lifting equipment take care that all local safety regulation is observed.
- **It is not allowed to exceed the carrying capacity of the lifting equipment with the device and the maximum load.**

5 Adjustments

5.1 Adjustment of the gripping range

Before the product can be lifted and transported, the gripping range has to be adjusted to the dimensions of the product.



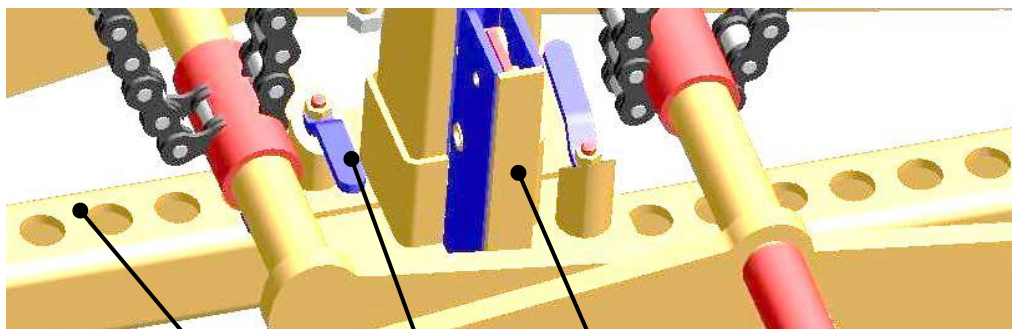
- The adjustment of the gripping range may **never** take place on both sides at the same time. **Always adjust the gripping range first to the one and then on the other side.**
- Pull the spring bolt upwards, rotate around 180° and lock in position (in nick).
- Move the rectangular tube, until the gripping range is approx. 5 cm larger than the product.
- Pull the spring bolt upwards again and rotate around 180°.



- Move the rectangular tube so long until the spring bolt engages in one of the holes.
- 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.



- **Caution** while adjusting of the gripping range. **There is a danger of injuring the hands!**



Automatic release

Spring bolt

Rectangular tube with adjustable holes

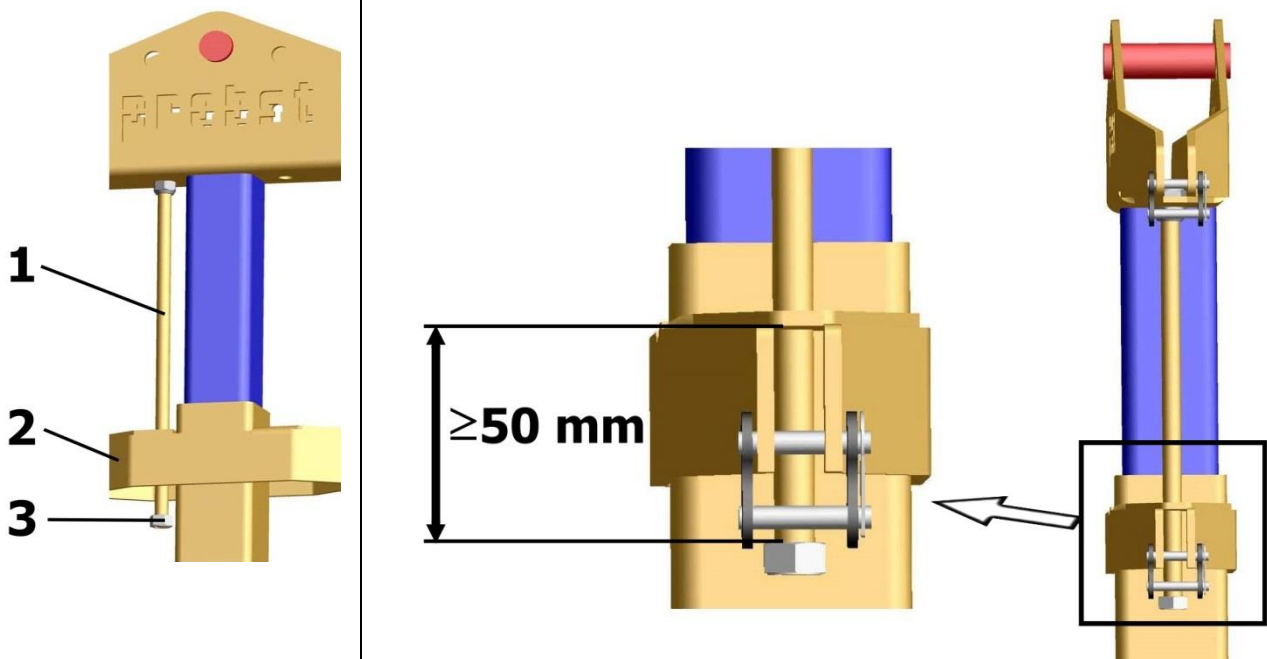
5.2 Adjustment of the threaded rod



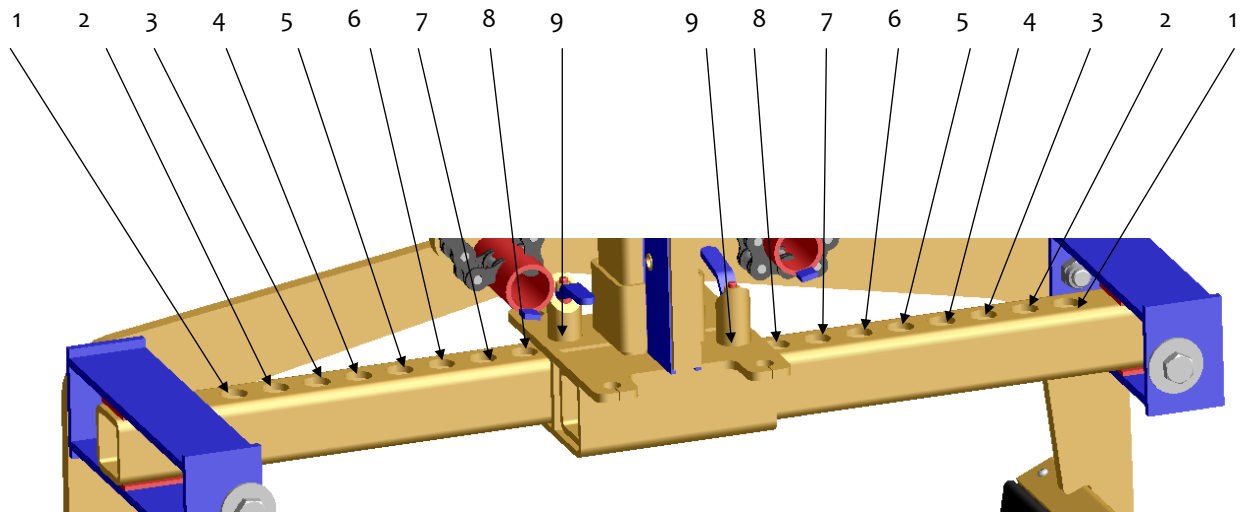
The gripping range must be adjusted always in the right way (see adjustment of the gripping range). Otherwise there is no warranty that the tension force is sufficient for a safety gripping of the gripping good. Otherwise there is a **danger that the load could fall down**.

With the adjustment of the gripping range must not the following:

The lower bolt nut on the threaded rod (1) must 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 bolt nut (3) and the bottom part (2). Otherwise is the buffer of the tension force to low.



5.3 Gripping ranges



Adjustment of the gripping area through the positions of the adjustable holes (symmetrical):	Possible gripping areas for gripping goods (product dimension):
Pos.1 (right) + Pos.1 (left)	from ~ 0 to ~ 80 mm
Pos.2 (right) + Pos.2 (left)	from ~ 80 to ~ 160 mm
Pos.3 (right) + Pos.3 (left)	from ~ 160 to ~ 270 mm
Pos.4 (right) + Pos.4 (left)	from ~ 270 to ~ 350 mm
Pos.5 (right) + Pos.5 (left)	from ~ 350 to ~ 430 mm
Pos.6 (right) + Pos.6 (left)	from ~ 430 to ~ 500 mm
Pos.7 (right) + Pos.7 (left)	from ~ 500 to ~ 570 mm
Pos.8 (right) + Pos.8 (left)	from ~ 570 to ~ 640 mm
Pos.9 (right) + Pos.9 (left)	from ~ 640 to ~ 730 mm

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.

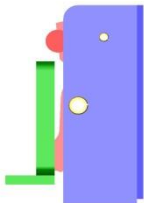
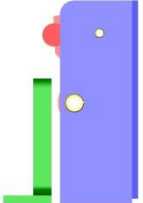
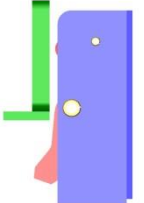
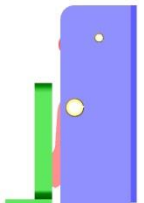
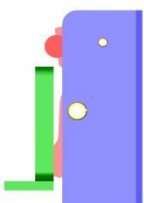


Shut-down the device without lifting equipment/carrier only on even ground. The gripping arms must be opened enough, to ensure a secure standing of the device. Otherwise exists danger of overturning!

6.2 Picture of the automatic release

The device is mounted with a automatic release, that means the opening and closing of the gripping arms results through the set down and lifting of the device.

Pictures the positions of the automatic release

 ①	 ②	 ③
• 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.
 ④	 ⑤/①	
• Device is set down with the gripping good (on the ground). • Gripping arms are opened.	• Device is lifted through the lifting equipment/carrier. • Gripping arms are opened. (laydown position of the device on the ground)	

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!!!

7.2 MECHANICAL

SERVICE INTERVAL	Maintenance work
First inspection after 25 operating hours	Control and tighten all screws and connections. (The implementation is only allowed by an expert).
All 50 operating hours	- Tighten all screws and connections (take care that the tightening torques according to the property class of the screws are observed). - Check all joints, bolts, guidance's and gears for correct function, if necessary adjust or replace it. - Check all Grippers (if available) for signs of wear. - Grease all slidings (if available) when the device is in opened position with a spatula. - Grease all grease nipples (if available) with a grease gun.
Minimum 1x per year (at rough conditions shorten the interval)	Check of all the suspension parts, bolts and straps. Check for corrosion and safety by an expert.

AUTOMATIC-RELEASE



Never grease the automatic-release, if necessary use oil!

7.3 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		
mechanical (optional)	Automatic release does not work	- Clean automatic release with high pressure-cleaner - Oil the automatic release (never with grease) - Change the inset of the automatic release

7.4 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 an expert.

7.5 Safety procedures

- It is the contractors responsibility to ensure that the device is checked by an expert in periods of max. 1 year and all recognized errors are removed (→ see BGR 500).
- The corresponding legal regulations and the regulations of the declaration of conformity have to be observed!
- We recommend, that after checking the device the badge „Safety checked“ is put on the device. (Order-No.: 2904.0056+inspection sticker with date).
- You can receive these badges from us.



The check by an expert must be proved!

Device	Year	Date	Expert	Company

7.6 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.

The maximum carrying capacity is the maximum load which can be handled with the device. Do not exceed this carrying capacity.

If you use the device in combination with other lifting equipment (Crane, chain hoist, forklift truck, excavator) consider the deadweight of the device.

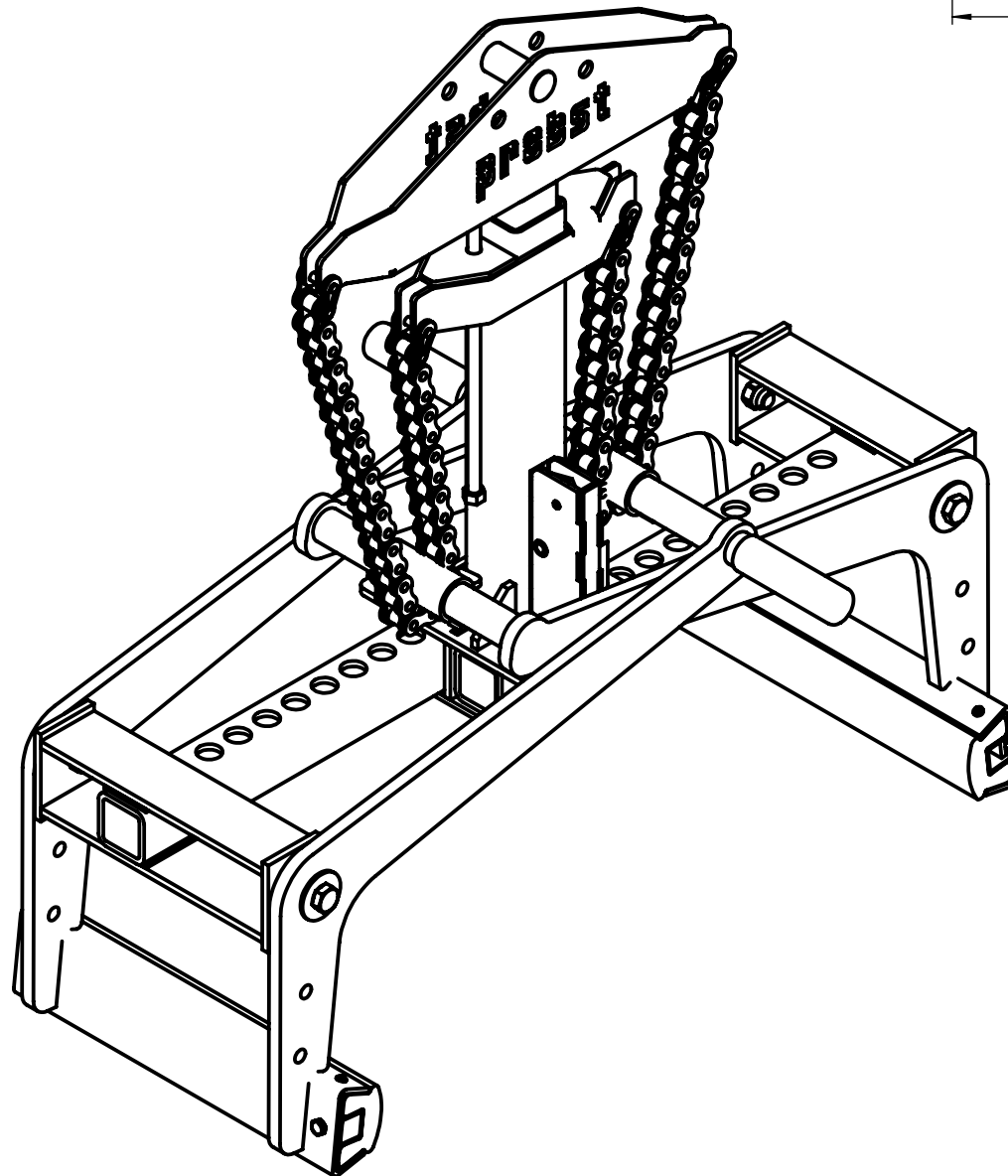
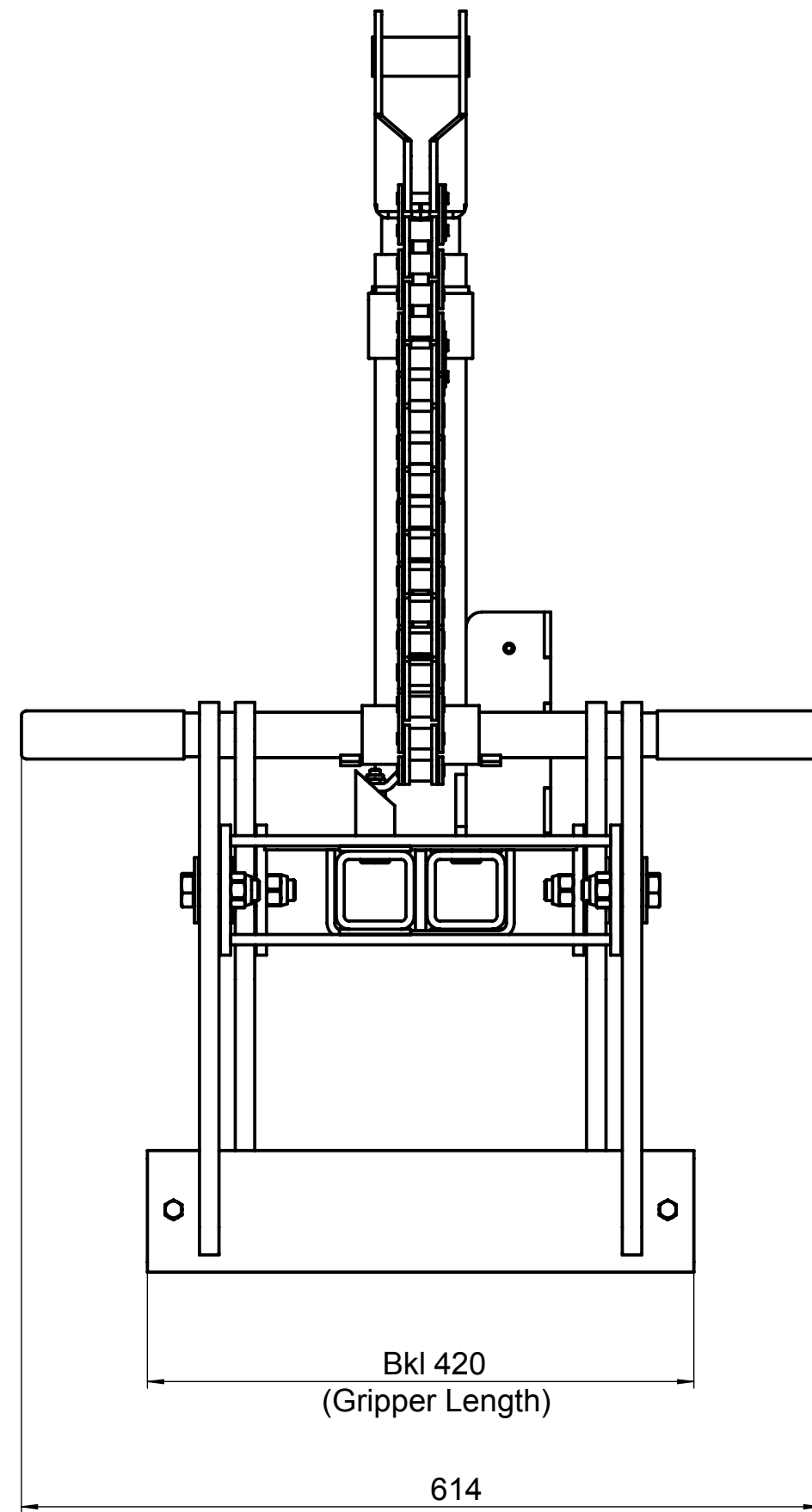
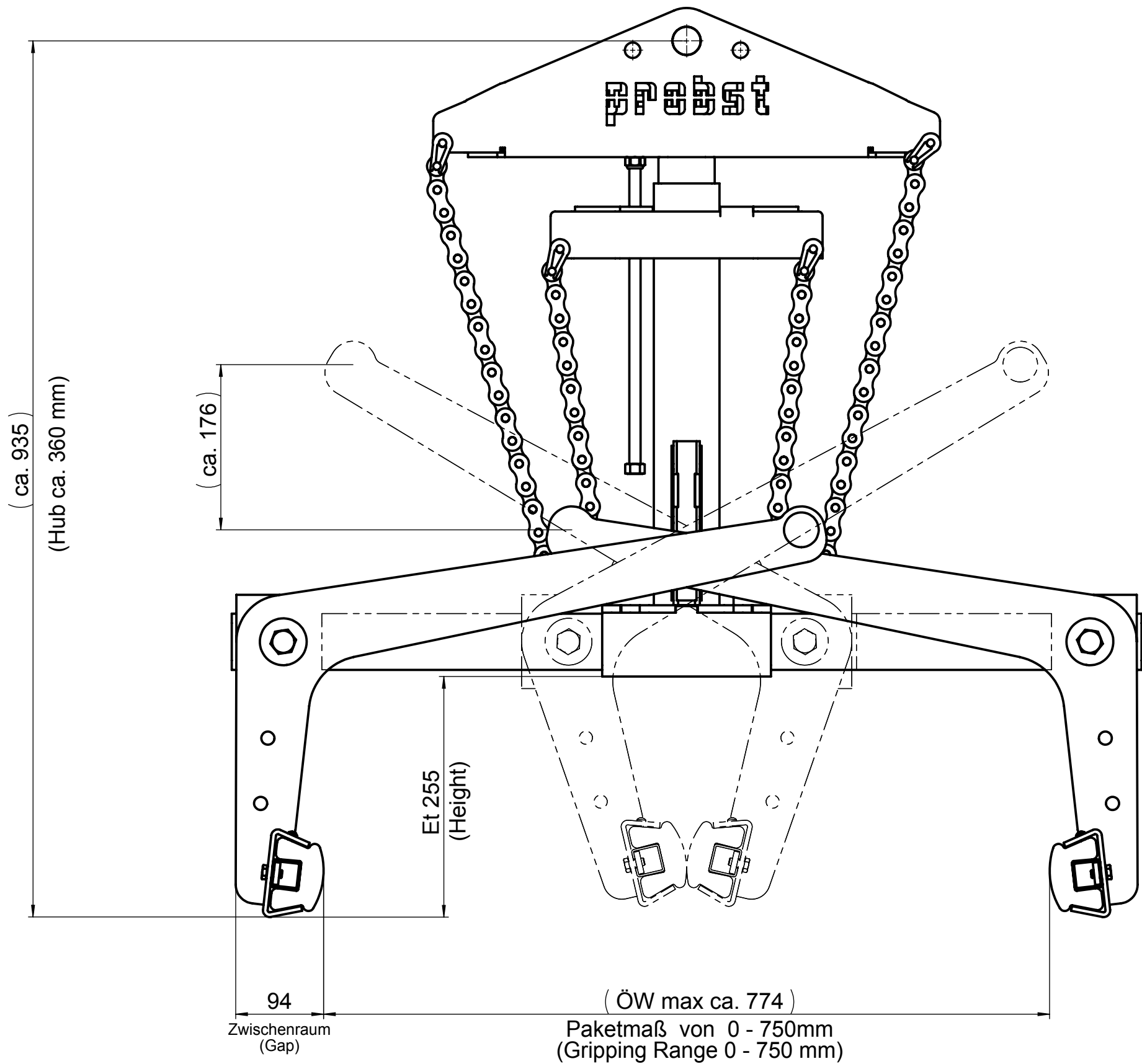


Example:

7.7 Hints to the renting/leasing of PROBST devices



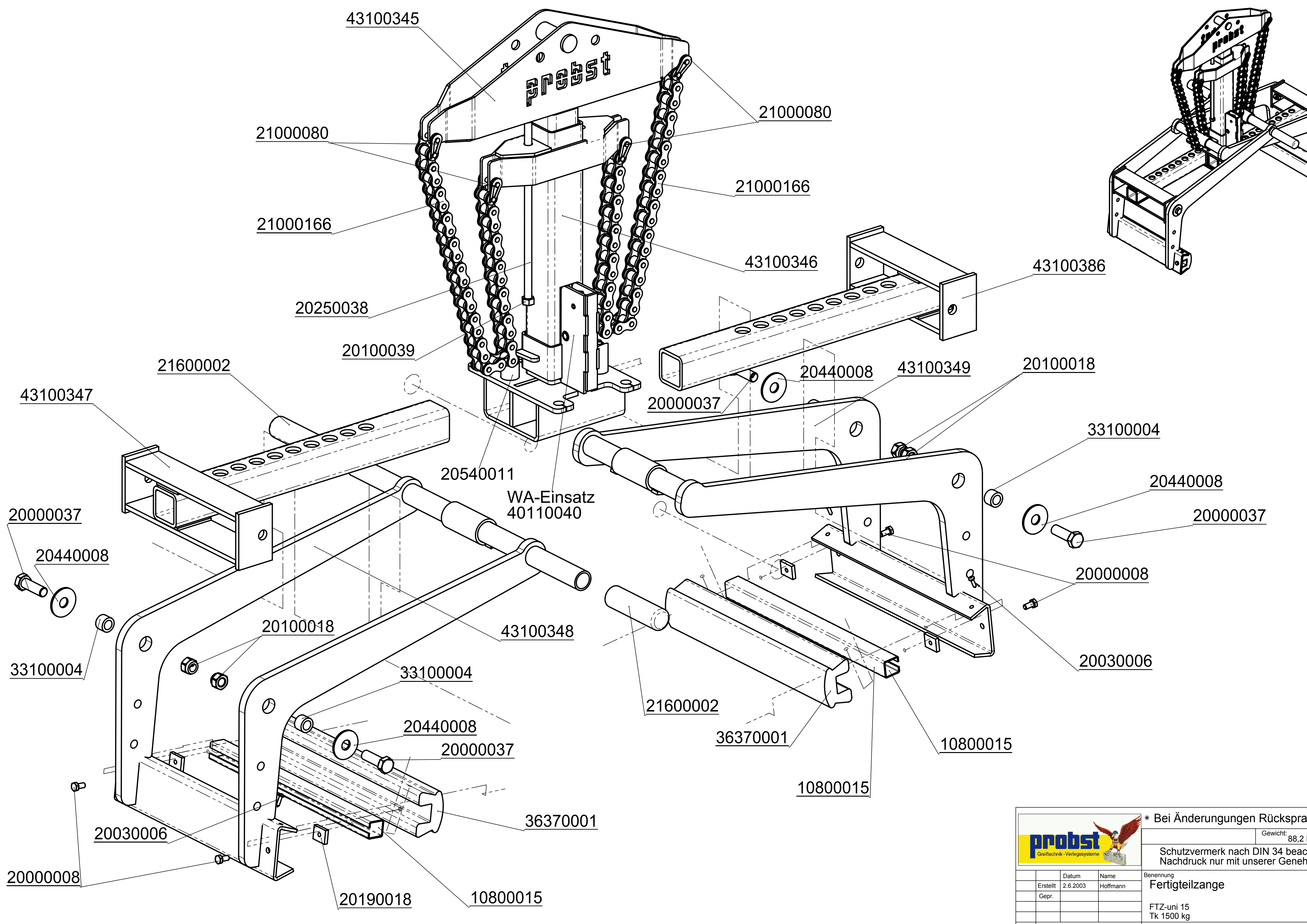
With every renting/leasing of PROBST devices the original operating instructions must be included unconditionally (in deviation of the users country's language, the respective translations of the original operating instructions must be delivered additionally)!



Tragfähigkeit: 1500 [kg]
Carrying Capacity: 1500 [kg] / (3300 [lbs.])

Grab for Prefabricated Concrete Products FTZ

 the better solution			Bei Änderungen Rücksprache TB !		
					Gewicht: 88,2 kg
			Schutzvermerk nach DIN 34 beachten! Nachdruck nur mit unserer Genehmigung!		
		Datum	Name	Benennung	
	Erst.	23.6.2003	Hoffmann	Fertigteilzange	
	Gepr.				
				FTZ-uni 15 Tk 1500 kg	
	WA:			Artikelnummer/Zeichnungsnummer	
	Kunde:			D53100256	
				Blatt 1	
				von 1	
Zust.	Urspr.	G083-1Z001		Ers. f.	Ers. d.

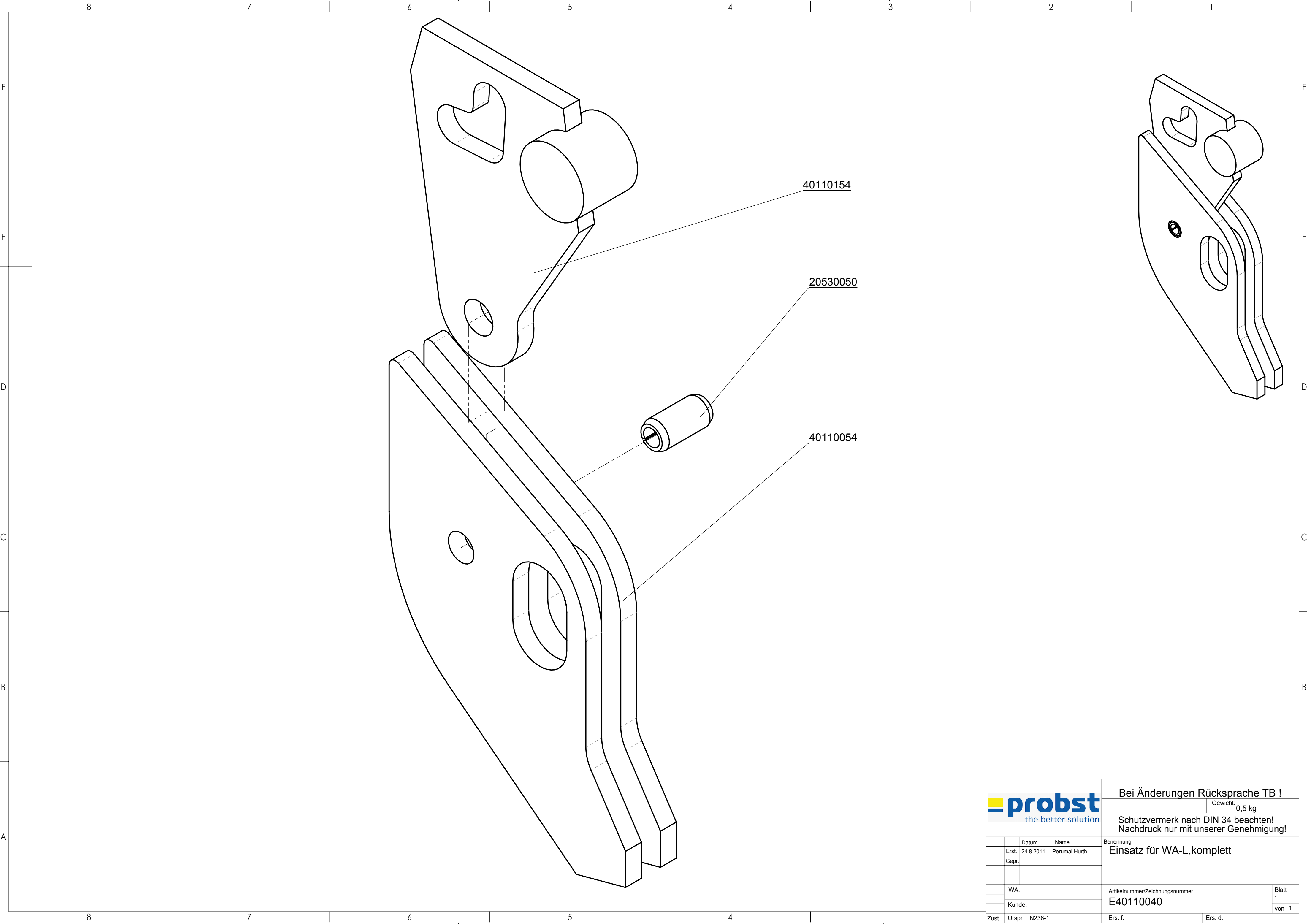




* Bei Änderungen Rücksprache TB !

Gewicht: 88,2 kg	
Schutzvermerk nach DIN 34 beachten! Nachdruck nur mit unserer Genehmigung!	
Benennung	Fertigteilezange
FTZ-uni 15 Tk 1500 kg	
Artikelnummer/Zeichnungsnummer E53100256	
Blatt 1 von 1	

Zust.	Urspr.	G083-1Z001	Ers. f.	Ers. d.
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 the better solution			Bei Änderungen Rücksprache TB !		
			Gewicht:		0,5 kg
			Schutzvermerk nach DIN 34 beachten! Nachdruck nur mit unserer Genehmigung!		
	Datum	Name	Benennung Einsatz für WA-L, komplett		
Erst.	24.8.2011	Perumal.Hurth			
Gepr.					
	WA:		Artikelnummer/Zeichnungsnummer E40110040		Blatt 1 von 1
	Kunde:				
Zust.	Urspr. N236-1		Ers. f.		Ers. d.

