



Operating Instructions

Translation of original operating instructions

Turf Stone Laying Clamp RGV

RGV-9/9

Contents

1	EC-Declaration of Conformity	3
2	Safety	4
2.1	Safety symbols	4
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	6
2.8.1	General	6
2.9	Safety procedures	7
2.9.1	General	7
2.9.2	Carrier / Lifting device	7
3	General.....	8
3.1	Authorized use.....	8
3.2	Survey and construction	10
3.3	Technical Data.....	10
4	Installation.....	11
4.1	Mechanical connection	11
4.1.1	Lifting eye / Suspension bolt	11
4.1.2	Load hook and chains	11
4.1.3	Fork sleeves (optional)	12
4.1.4	Rotators (optional)	12
5	Adjustments	13
5.1	Adjustment of inside height / gripping range.....	13
5.2	Adjustment of the carrying handle	14
6	Operation	15
6.1	Operating for devices with automatic release.....	15
6.2	Picture of the automatic release	16
7	Maintenance and care	17
7.1	Maintenance	17
7.1.1	Mechanical	17
7.2	Trouble shooting	18
7.3	Repairs	18
7.4	Safety procedures	19
7.5	Hints to the type plate.....	20
7.6	Hints to the renting/leasing of PROBST devices	20

1 EC-Declaration of Conformity

Description: **Turf Stone Laying Clamp RGV**
Type: **RGV-9/9**
Order number: **5310.0372**
Manufacturer: Probst GmbH
Gottlieb-Daimler-Straße 6
71729 Erdmannhausen, Germany
info@probst-handling.de
www.probst-handling.de



The machine described above complies with the relevant requirements of the following EU directives:

EC-machinery directive 2006/42/EC

The following standards and technical specifications were used:

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)

Authorized person for EC-documentation:

Name: J. Holderied

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

Signature, information to the subscriber:

Erdmannhausen, 07.08.2018.....

(M. Probst, 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:	<ul style="list-style-type: none"> specify the minimum and maximum product measurements of the gripping good, which can be gripped with this device.
Gripping good(s):	<ul style="list-style-type: none"> is the product, which will be gripped or transported.
Opening width:	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> is the maximum gripping height of gripping goods, conditional of the height of the gripping arms of the device.
Device:	<ul style="list-style-type: none"> is the description for the gripping device.
Product dimensions:	<ul style="list-style-type: none"> Are the dimensions of the gripping good (e.g. length, breadth, height of the product).
Dead weight:	<ul style="list-style-type: none"> is the own weight (without gripping good) of the device.
Carrying capacity/working load limit (WLL*):	<ul style="list-style-type: none"> specify the maximum possible load of the device (for lifting of gripping goods).

* = WLL → (english:) Working Load Limit

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:
	The transportation of non rectangular goods is not allowed!	2904.0213	30 mm
		2904.0212	50 mm
		2904.0211	80 mm
	It is not allowed to be under hanging loads. Danger to life!	2904.0210	30 mm
		2904.0209	50 mm
		2904.0204	80 mm
	Do not lift any components off-centre (always in centre of gravity).	2904.0216	30 mm
		2904.0215	50 mm
		2904.0214	80 mm

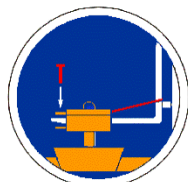
WARNING SIGN

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

REGULATORY SIGN

Symbol	Meaning	Order-No.:	Size:
	The manual guiding of the device is only allowed at the red handles.	2904.0227	30 mm
		2904.0226	50 mm
		2904.0225	80 mm
	Each operator must have read and understood the operating instructions (and all safety instructions).	2904.0665	30 mm
		2904.0666	50 mm

OPTIONAL

	Be sure that the fork sleeves are mechanically fixed (with locking screw and safety chain or rope) to the lifting device/carrier.	2904.0223	50 mm
		2904.0222	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.

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.
- 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.

2.8 Function Control

2.8.1 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 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.
- 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.



- 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.

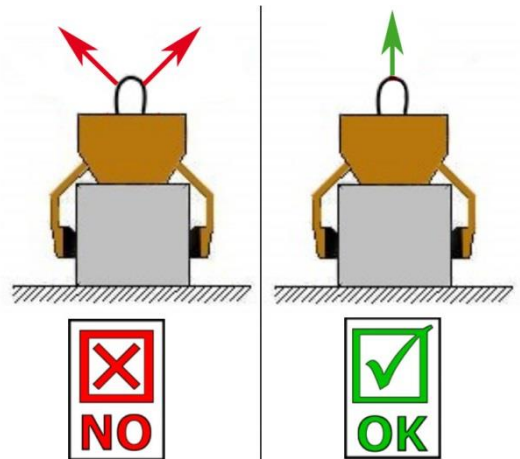


Fig. A



- 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.**

3 General

3.1 Authorized use

The device (RGV-9/9) is specially designed for gripping, transporting and the following laying of Turf Stones (60 x 40 cm, hole dim. 9x9 cm → see Fig. 1) and can be handled either by hand (2-man on handles), or over lifting eye by machine (e.g. excavator).

With this device (RGV-9/9) can be installed 1 to 5 units at once.

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

- Universally adjustable gripping range
- Lifting eye for the crane hook (lifting equipment operation)
- handles for the guidance of the device (turnable by 90°)
- automatic release for the fully automatic switch over from „full“ to “empty”
- exchangeable adaptors (for 9x9 cm)

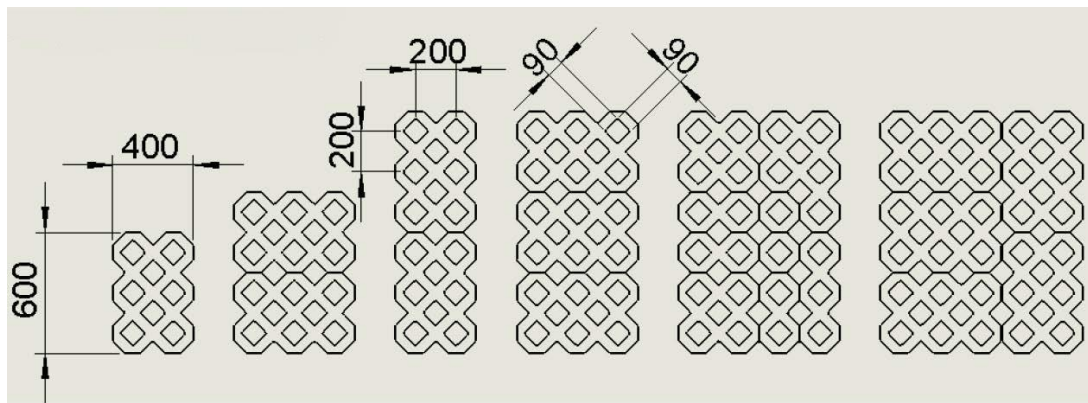


Fig. 1



- 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 load is suitable to be handled.

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



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**.



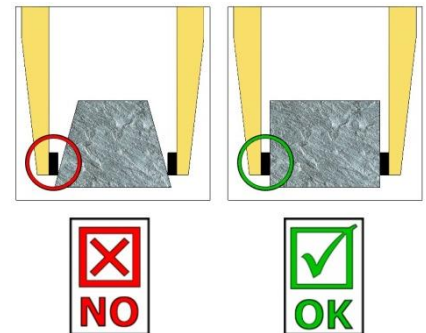
NOT ALLOWED ACTIVITIES:

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

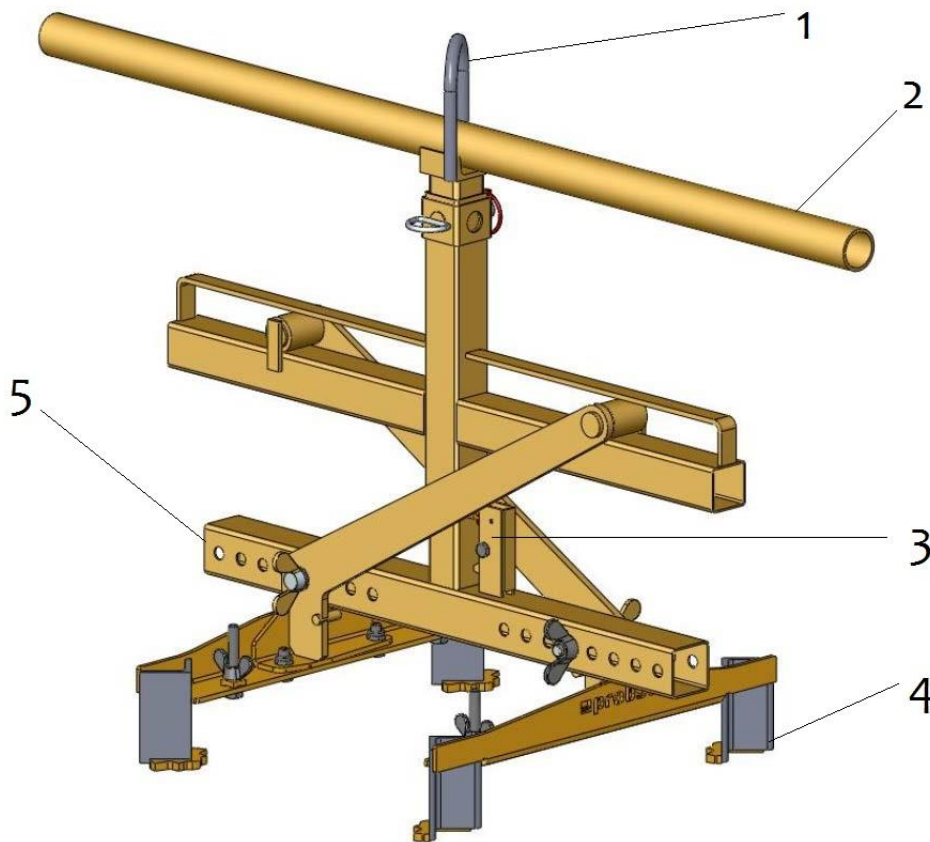
Never exceed the **carrying capacity/working load limit (WLL)** and the **nominal width/gripping range** of the device.

All unauthorized transports with the device are **strictly prohibited**:

- The transport of people and animals.
- The gripping and transporting of other loads and materials than described in this operating instructions.
- Never suspend any goods with ropes, chains or similar at the device.
- Gripping of gripping goods with **packaging foil**, because they could **fall down**.
- The gripping of gripping goods with treated surfaces (such as painting/varnish, coating or the like), because they could **fall down**. Treated surfaces lead to a reduction in the coefficient of friction between the grippers and the gripping good.
- The 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”.



3.2 Survey and construction



1	Lifting eye
2	Handle (turnable by 90°)
3	Automatic release for fully automatic switch-over from "full" to "empty"
4	Adaptor with grippers
5	Adjustment of gripping range (W)

3.3 Technical Data

Type:	Gripping Range W depending on adaptors	Working Load Limit WLL	Dead Weight
RGV-9/9	300/500 mm (12 – 20")	250 kg (550 lbs)	20 kg (44 lbs)

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 attaching devices (turning device, fork sleeves etc.) and the additional load of the gripping goods!

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



In **no case** it is allowed to mount mechanical 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!**

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 hook and chains



Fit suspension ring in the load hook of the lifting device/carrier.

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

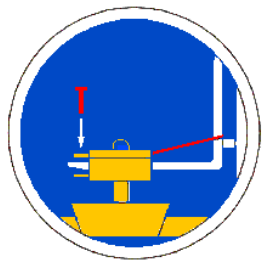
Attaching the device to the lifting device/carrier, take care that all local safety regulation is observed.

4.1.3 Fork sleeves (optional)

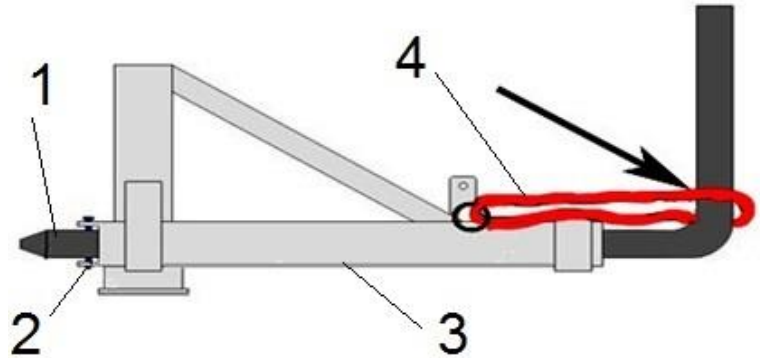
To establish a mechanical connection between the fork lift truck and the fork sleeves you have to put the forks into the fork sleeves and fix it with the locking bolt or with a chain/rope, connected to the eyelet on the fork sleeves and the lift frame.



It is definitely necessary to establish this connection. Otherwise the device could slide from the forks.
DANGER OF ACCIDENTS!



- 1 Fork (of fork lift truck)
- 2 locking bolt
- 3 Fork sleeve
- 4 Chain/rope



4.1.4 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.

5 Adjustments

5.1 Adjustment of inside height / gripping range

The illustrated gripping good (Turf Stone) can be gripped in only two adjusting holes (4th hole each from the inside) for a gripping range/gripping width (GW) of approx. 300 mm and adjusting holes (7th hole each from the inside) for a gripping range/gripping width (GW) of approx. 500 mm (Fig. 1).

In addition, the "inside height E (Et)" of the grippers on the adapter (4) can be changed, which must be adjusted depending on the gripping goods to be picked up (Turf Stones) (Fig. 3).

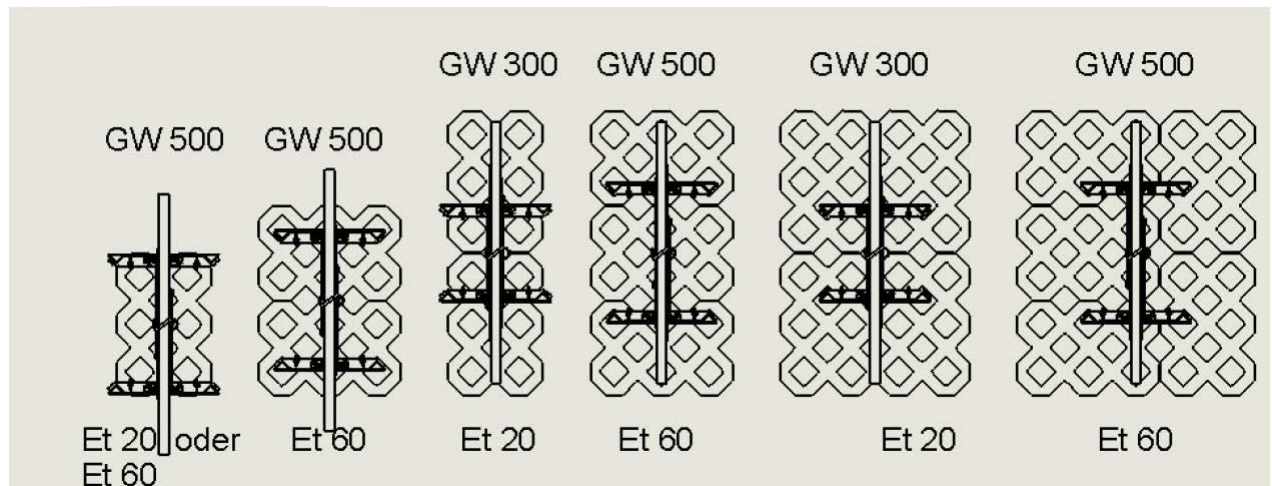


Fig. 1

GW = gripping range/gripping width

Et = inside height E

- By adapting the adapters with grippers (4), the device can be used for lifting different sizes of gripping goods.
- The gripping range/gripping width (GW) is adjusted as follows:
- Place the device on the ground, loosen the wing nuts (7) and then remove the wing screws (8).
- Displace the adapter with grippers (4) until the gripping range/gripping width (GW) is adjusted to the gripping good, making sure that both adapters with grippers (4) are positioned symmetrically (to the central axis of the device).
- Insert the wing screws (8) into the corresponding adjusting holes and then secure again with wing nuts (7).

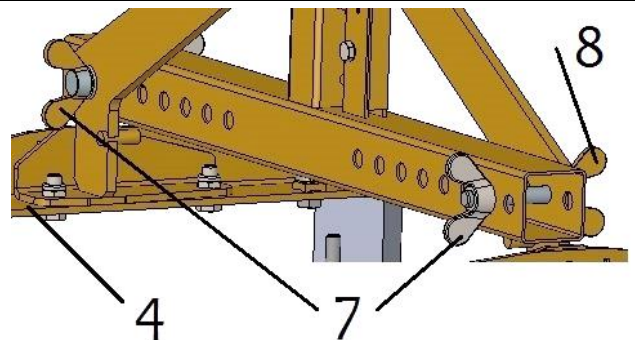


Fig. 2

- The adjustment of the "inside height E (Et)" is done by adjusting of screw (6).



- All 4 adjusting screws (6) **must have** exactly the same adjustment dimension (E) on both adapters (4), otherwise there is **danger** of slipping of the gripping goods (stone layers)!

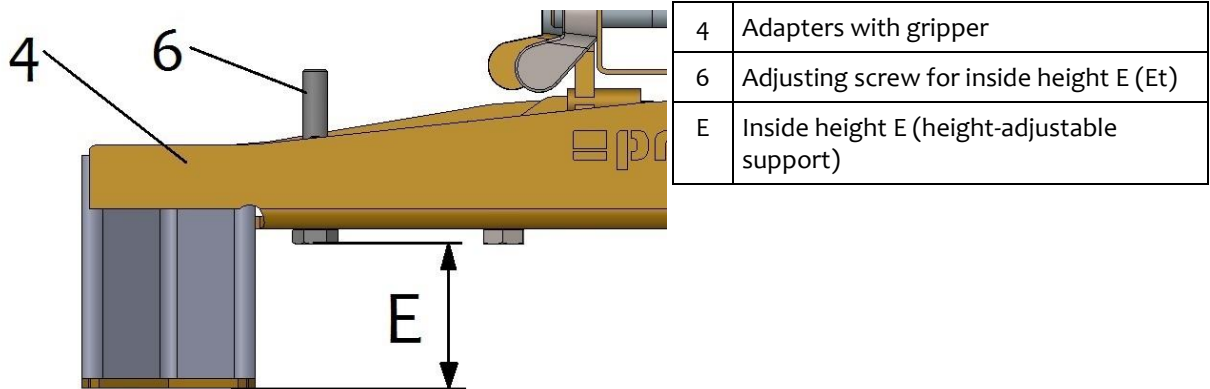


Fig. 3

5.2 Adjustment of the carrying handle

If space is limited, the carrying handle (2) of the device can be turned by 90°. To do this, proceed as follows:

- Remove the locking pin (9) of the socket pin (10) and then pull out the socket pin (10).
- Remove the carrying handle of the rectangular tube and turn it by 90°.
- Then reinsert the carrying handle (2) onto the rectangular tube.
- Insert socket pin (10) again and secure with linch pin (9).

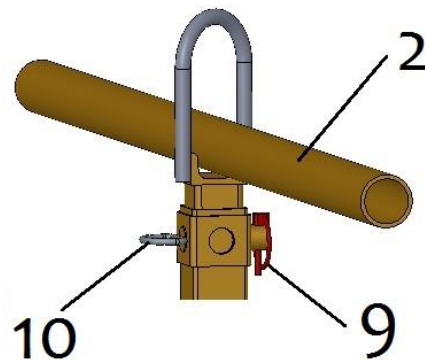


Fig. 4

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.

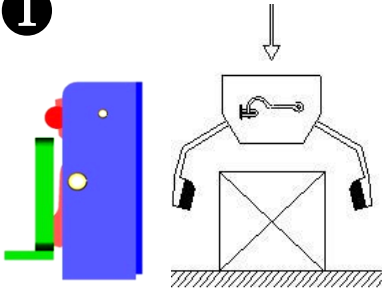
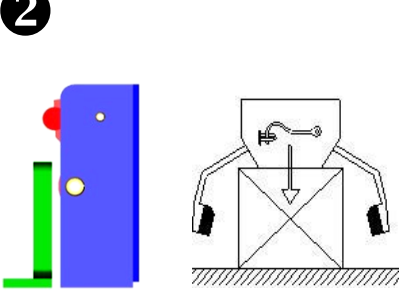
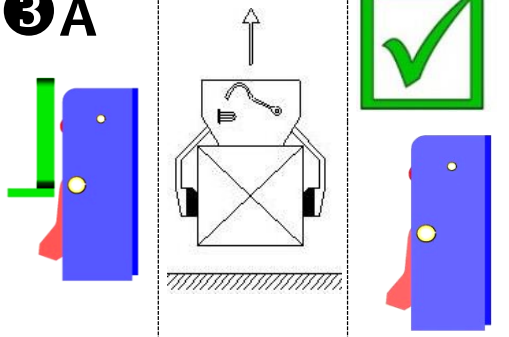
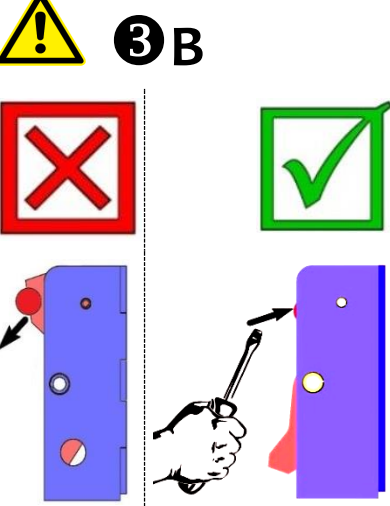
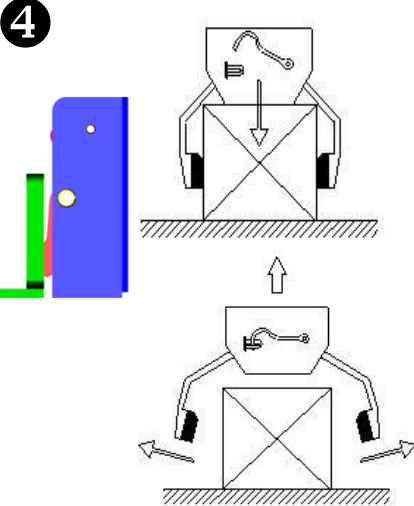
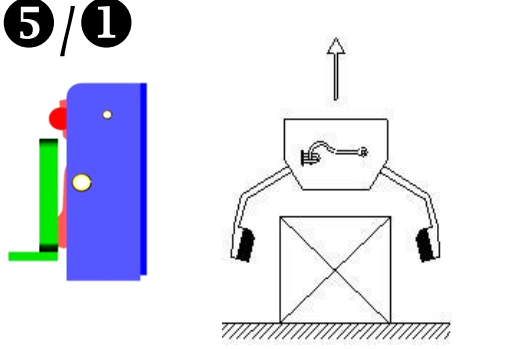


Shut-down the device without lifting equipment/carrier only on even ground. The gripping arms must be opened enough, to ensure a secure standing of the device. Otherwise there is a danger of overturning!

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

<p>1</p>  <ul style="list-style-type: none"> • Device is lifted through the lifting equipment/carrier. • Gripping arms are opened. 	<p>2</p>  <ul style="list-style-type: none"> • Device is set up on the gripping good. • Gripping arms are opened. 	<p>3 A</p>  <ul style="list-style-type: none"> • Device is lifted through the lifting equipment/carrier. • Gripping good is clamped and can be transported to the destination.
<p>3 B</p>  <ul style="list-style-type: none"> • With faulty switching, the change-over switch must be pushed back manually (e.g. with a screwdriver).¹⁾ 	<p>4</p>  <ul style="list-style-type: none"> • Device is set down with the gripping good (on the ground). • Gripping arms are opened. 	<p>5 / 1</p>  <ul style="list-style-type: none"> • Device is lifted through the lifting equipment/carrier. • Gripping arms are opened. (laydown position of the device on the ground)

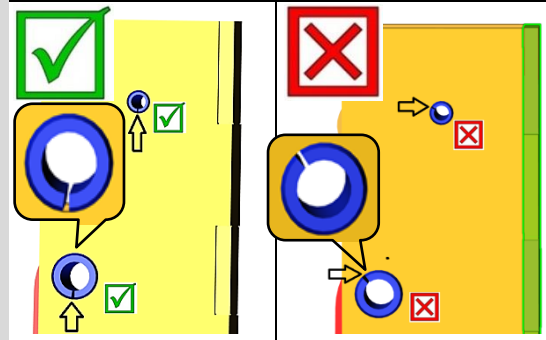


¹⁾ Otherwise there may be faulty switching and when setting down the load this can cause deformation or damage of the automatic release!
The jerky lifting and lowering of the device with and without load. e.g. caused through driving fast with the lifting equipment/carrier over uneven grounds is **forbidden**



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.



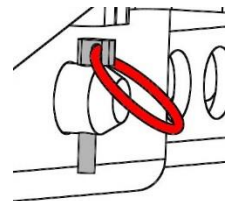
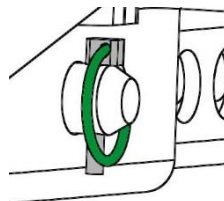
All operations may only be made in closed state of the device!

For all operations you have to make sure, that the device will not close unintended. **Danger of injury!!!**

7.1.1 Mechanical

SERVICE INTERVAL	Maintenance work
First inspection after 25 operating hours	<ul style="list-style-type: none"> Control and tighten all screws and connections. (The implementation is only allowed by an expert).
All 50 operating hours	<ul style="list-style-type: none"> Tighten all screws and connections (take care that the tightening torques according to the property class of the screws are observed). Check all existing safety elements (such as linchpins) for perfect function and replace defective safety elements. → 1) 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)	<ul style="list-style-type: none"> Check of all the suspension parts, bolts and straps. Check for corrosion and safety by an expert.

1)



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)	<ul style="list-style-type: none"> The grippers are worn 	<ul style="list-style-type: none"> Replace the grippers
(optional)	<ul style="list-style-type: none"> The maximum load is exceed 	<ul style="list-style-type: none"> Reduce the weight of. the load
(Adjustment of the gripping range) (optional)	<ul style="list-style-type: none"> The actual opening width is not correct 	<ul style="list-style-type: none"> Adjust the gripping range according to the load you want to transport
(Property of material)	<ul style="list-style-type: none"> The surface of the material is dirty or the material is not suitable / allowed for this device. 	<ul style="list-style-type: none"> Check the surface of the material or ask the manufacturer, if you the material is allowed for this device.
Unbalanced load		
	<ul style="list-style-type: none"> The device is not loaded symmetrically 	<ul style="list-style-type: none"> Adjust the position of the load
(Adjustment of the gripping range) (optional)	<ul style="list-style-type: none"> The adjustment of the gripping range is not symmetrical. 	<ul style="list-style-type: none"> Correct the adjustment of the gripping range
Automatic release does not work		
mechanical (optional)	<ul style="list-style-type: none"> Automatic release does not work 	<ul style="list-style-type: none"> Clean automatic release with high pressure-cleaner 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 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 (→ 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

7.5 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.

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 users country's language, the respective translations of the original operating instructions must be delivered additionally)!

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-mail to service@probst-handling.de / via fax or post

Operator: _____

Device type: _____

Device-No.: _____

Article -No.: _____

Year of make: _____

First inspection after 25 operating hours

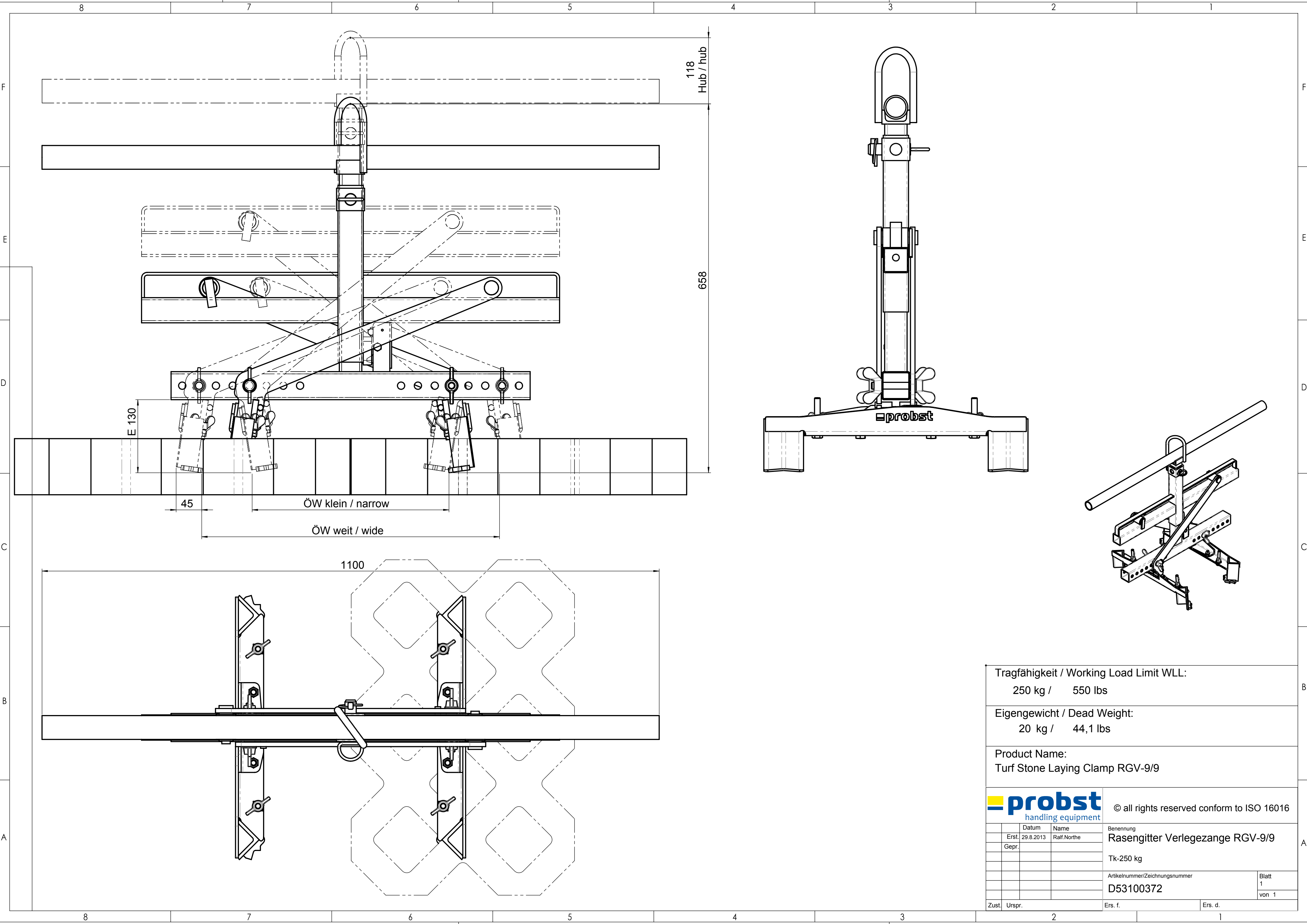
Date:	Maintenance work:	Inspection by company:
		Company stamp
	
		Name Signature

All 50 operating hours

Date:	Maintenance work:	Inspection by company:
		Company stamp
	
		Name Signature
		Company stamp
	
		Name Signature
		Company stamp
	
		Name Signature

Minimum 1x per year

Date:	Maintenance work:	Inspection by company:
		Company stamp
	
		Name Signature
		Company stamp
	
		Name Signature

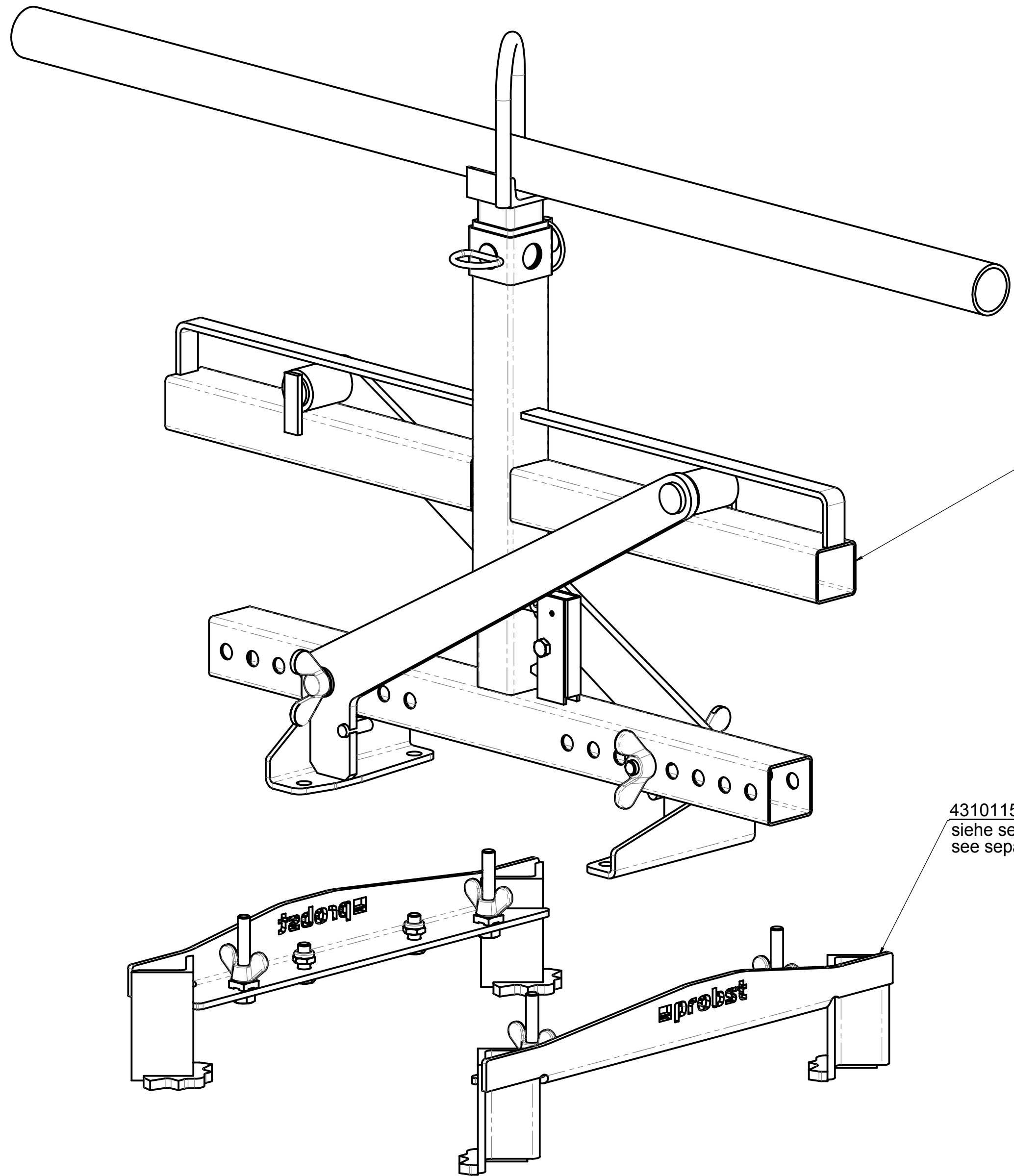


Tragfähigkeit / Working Load Limit WLL:
250 kg / 550 lbs

Eigengewicht / Dead Weight:
20 kg / 44,1 lbs

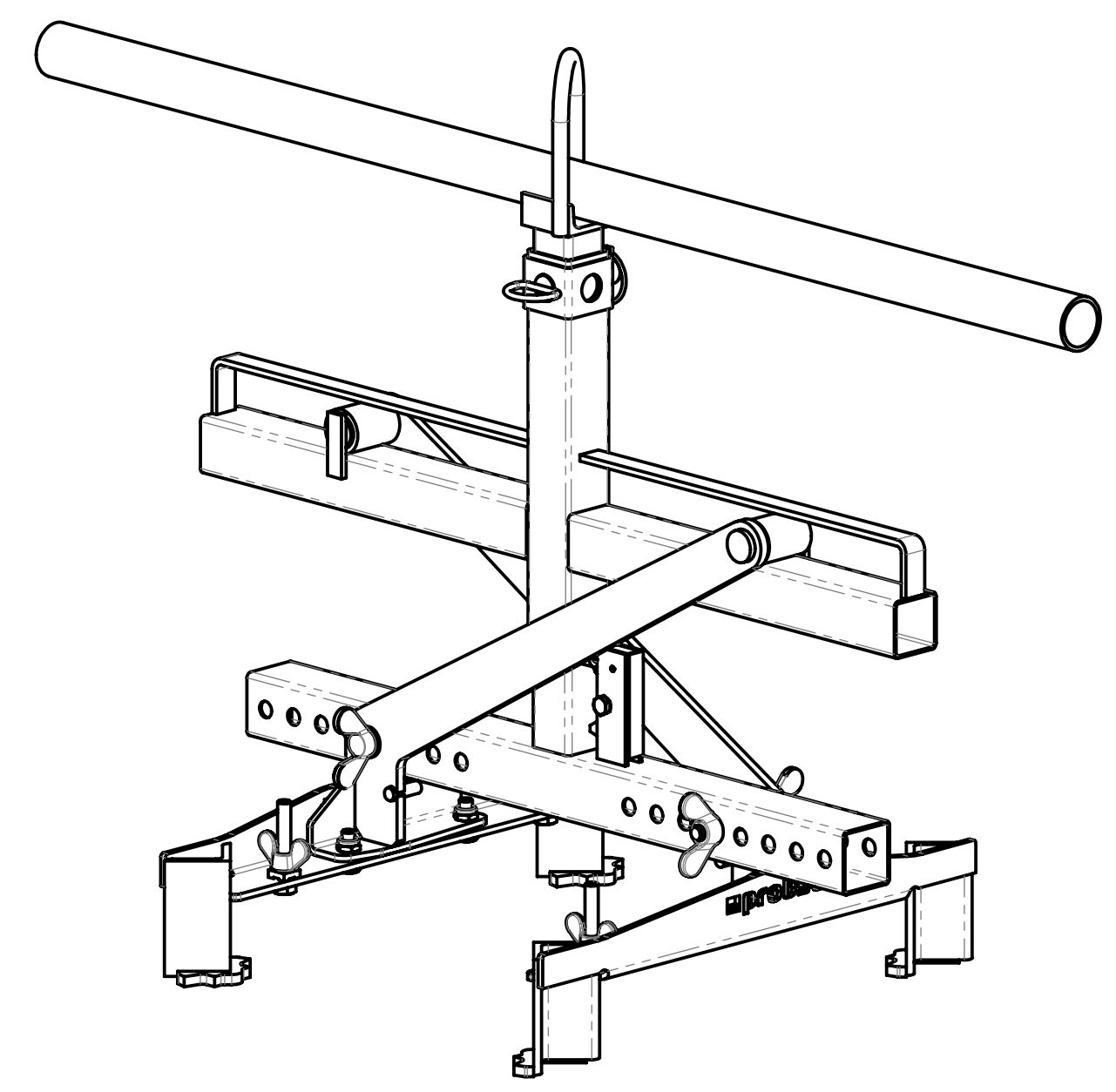
Product Name:
Turf Stone Laying Clamp RGV-9/9

			© all rights reserved conform to ISO 16016	
	Datum	Name	Benennung	
Erst.	29.8.2013	Ralf Northe	Rasengitter Verlegezange RGV-9/9	
Gepr.			Tk-250 kg	
			Artikelnummer/Zeichnungsnummer	
			D53100372	
			Blatt 1 von 1	
Zust.	Urspr.	Ers. f.	Ers. d.	

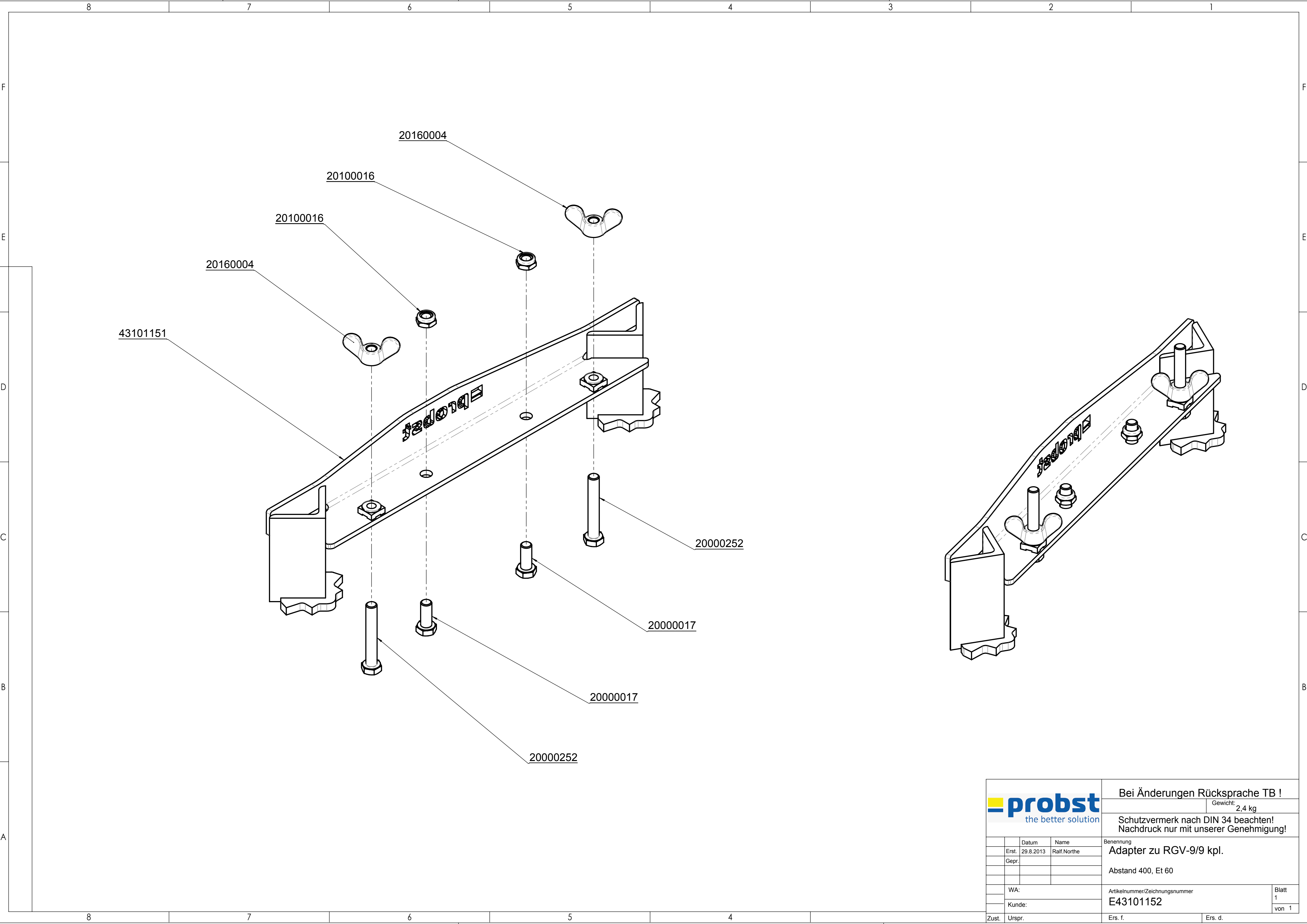


43101154
siehe separate Liste
see separate list

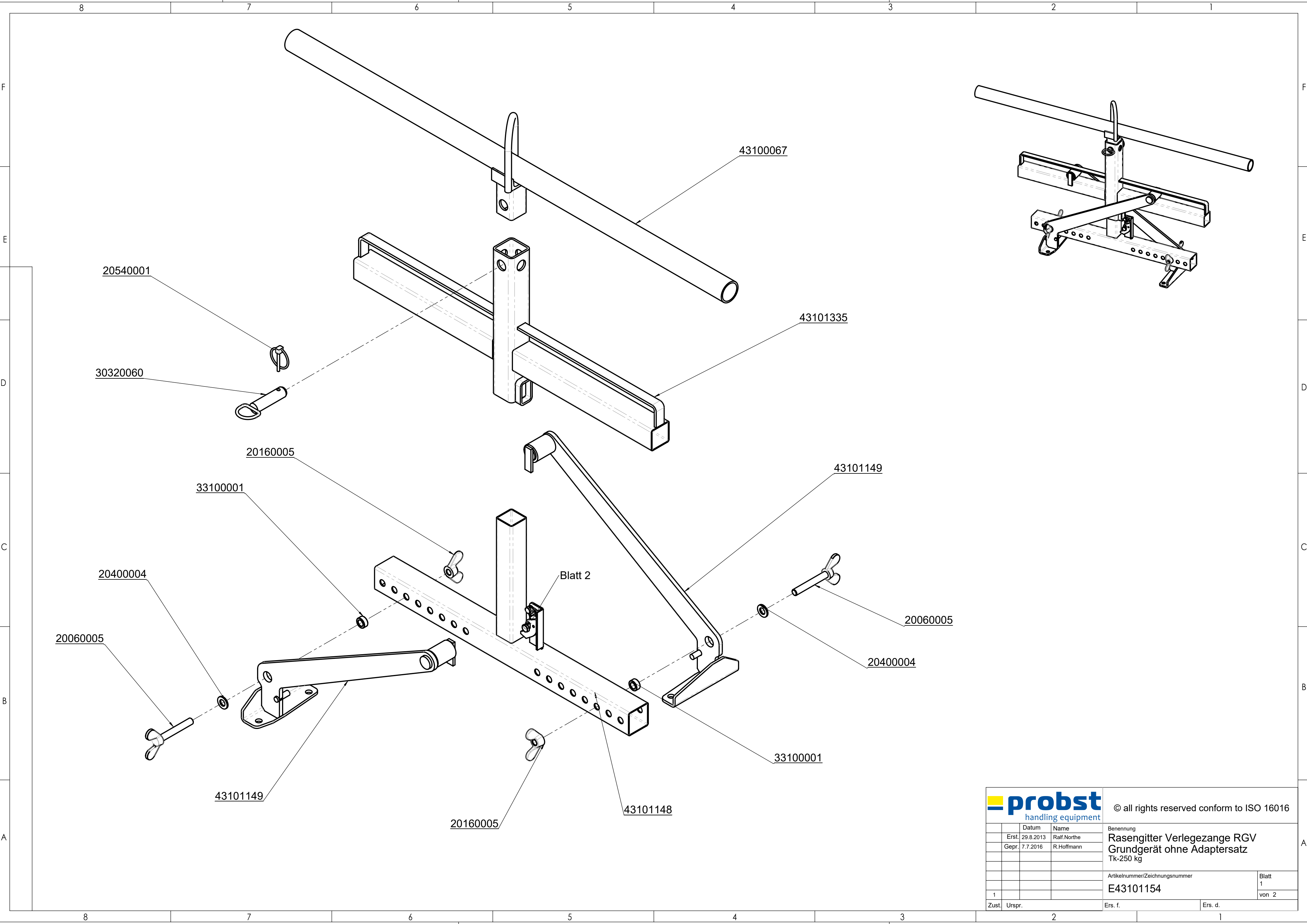
43101152
siehe separate Liste
see separate list



 the better solution		Bei Änderungen Rücksprache TB !	
			Gewicht: 20,4 kg
		Schutzvermerk nach DIN 34 beachten! Nachdruck nur mit unserer Genehmigung!	
	Datum	Benennung	
Erst.	29.8.2013	Rasengitter Verlegezange RGV-9/9	
Gep.		Tk-250 kg	
WA:		Artikelnummer/Zeichnungsnummer	Blatt
Kunde:		E53100372	1
			von 1
Zust.	Urspr.	Ers. f.	Ers. d.

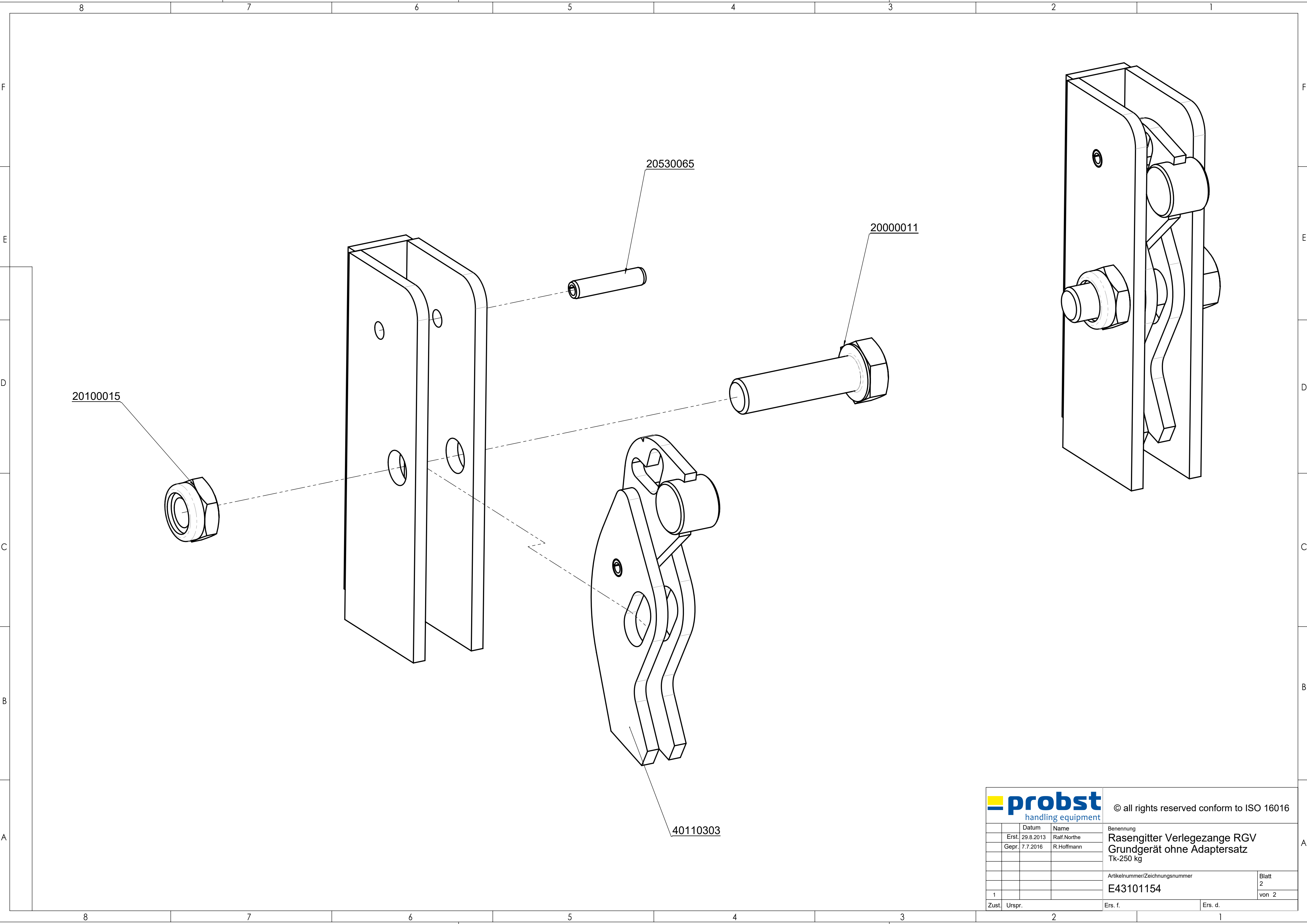


 the better solution				Bei Änderungen Rücksprache TB !			
				Gewicht:		2,4 kg	
				Schutzvermerk nach DIN 34 beachten! Nachdruck nur mit unserer Genehmigung!			
				Benennung			
				Adapter zu RGV-9/9 kpl.			
				Abstand 400, Et 60			
				Artikelnummer/Zeichnungsnummer			
				E43101152			
				Blatt 1			
				von 1			
Zust.				Urspr.		Ers. f.	
						Ers. d.	



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Datum		Name	Benennung	
Erst.	29.8.2013	Ralf.Northe	Rasengitter Verlegezange RGV Grundgerät ohne Adaptersatz Tk-250 kg	
Gepr.	7.7.2016	R.Hoffmann		
			Artikelnummer/Zeichnungsnummer	
			E43101154	
1			Blatt 1 von 2	
Zust.	Urspr.		Ers. f.	Ers. d.



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	Datum	Name
Erst.	29.8.2013	Ralf.Northe
Gepr.	7.7.2016	R.Hoffmann

Benennung
Rasengitter Verlegezange RGV
Grundgerät ohne Adaptersatz
Tk-250 kg

1		

Artikelnummer/Zeichnungsnummer
E43101154

Blatt
2
von 2

Zust.	Urspr.
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Ers. f. Ers. d.

