



Operating Instructions

Translation of original operating instructions

Cone Insert Clamp

KIG II



Bitte beachten Sie, dass das Produkt ohne vorliegende Betriebsanleitung in Landessprache nicht eingesetzt / in Betrieb gesetzt werden darf. Sollten Sie mit der Lieferung des Produkts keine Betriebsanleitung in Ihrer Landessprache erhalten haben, kontaktieren Sie uns bitte. In Länder der EU / EFTA senden wir Ihnen diese kostenlos nach. Für Länder außerhalb der EU / EFTA erstellen wir Ihnen gerne ein Angebot für eine Betriebsanleitung in Landessprache, falls die Übersetzung nicht durch den Händler/Importeur organisiert werden kann.

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.

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EC-Declaration of Conformity / UKCA-Declaration of Conformity

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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

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Erdmannhausen, 02.08.2021.....
(Eric Wilhelm, Managing director)

2 General

2.1 Authorized use

The device (KIG 2) is only suitable for symmetrical and asymmetrical cones with a cover hole diameter of 625 - 1000 mm.

Take care that the capacity and the gripping range of the device (KIG 2) is not exceeded.

This device (KIG 2) is specially designed for heavy and duty work with fork lift trucks or cranes.

The gripping goods (cones) have to be cured enough to resist the necessary gripping force of the device.

This device is series equipped with the following specifications:

- Crane eye for attaching the crane hook
- Fork sleeves for fork lift
- Automatic release (full automatic change-over from “full” to “empty”)
- Exchangeable rubber metal bars for the gentle handling of cones



- 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.



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.

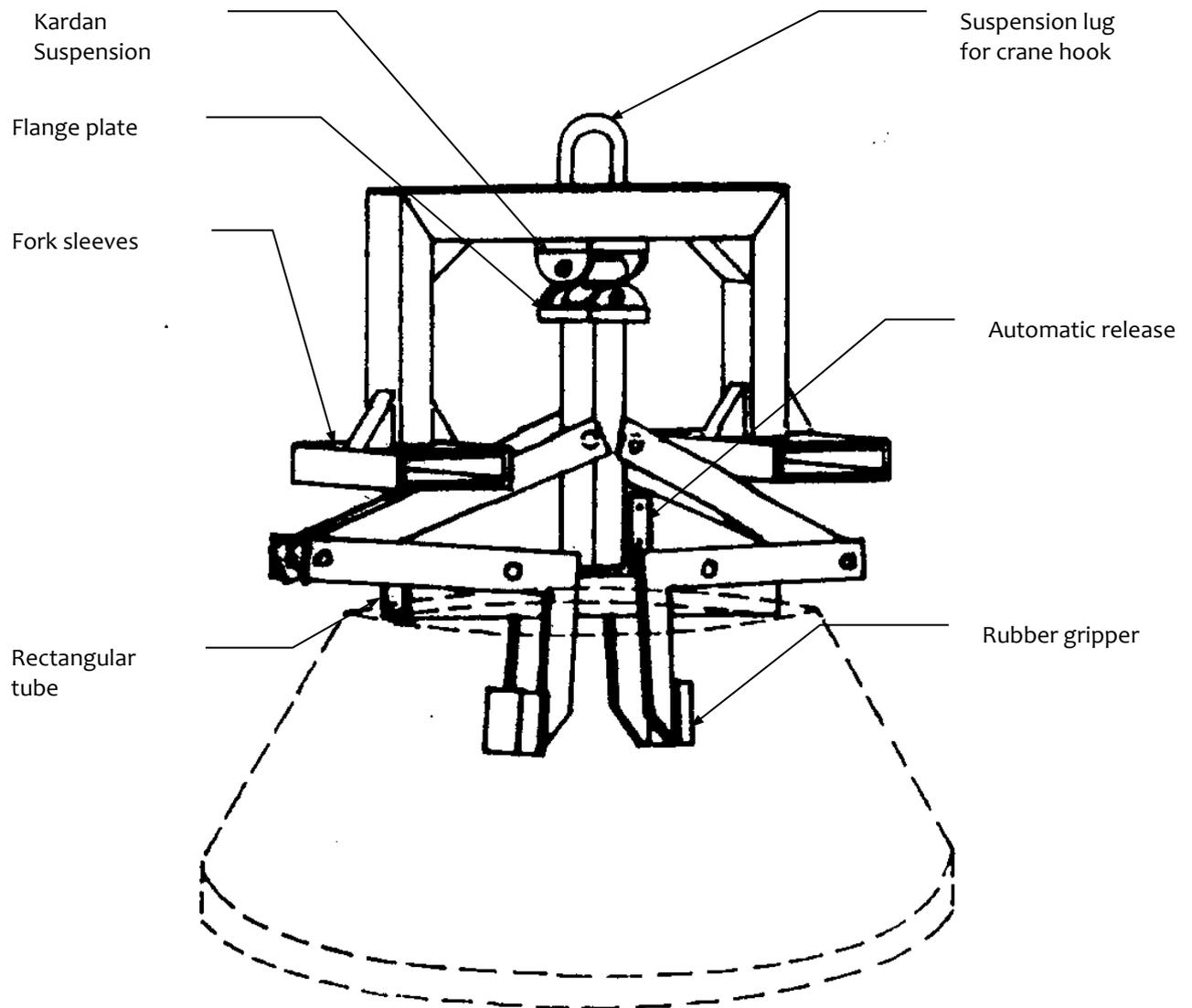
The gripping and transporting of other loads and materials than described in this operating instructions.

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.

2.2 Survey and construction



2.3 Technical data

Type:	∅-Range [mm]	Capacity [kg]	Dead weight [kg]
KIG 2	625 – 1.000	2.000	300

2.4 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.

2.5 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>gripping range + measure to drive over the gripping good = 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

2.6 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

2.7 Safety Marking

PROHIBITION SIGN

Symbol	Meaning	Order-No.:	Size:
	It is not allowed to be under hanging loads. Danger to life!	2904.0210 2904.0209 2904.0204	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:
	Each operator must have read and understood the operating instructions (and all safety instructions).	2904.0665 2904.0666	30 mm 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 2904.0222	50 mm 80 mm
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3 Safety

3.1 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.

3.2 Protective equipment

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

- Protective clothing
- Safety gloves
- Safety shoes

3.3 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.

3.4 Function Control

3.4.1 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.

3.5 Safety procedures

3.5.1 Lifting devices and forklift trucks



The lifting device / forklift truck including truss have to be in good, safe working condition. Only authorized and qualified persons are allowed to operate the lifting device / forklift truck.



Never exceed the maximum allowable carrying capacity/working load limit (WLL) of the lifting device / forklift truck!

3.5.2 General



- Do not swing it over people heads.
- The manual guiding of the device is only allowed at the 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.



- The stay under lifted load is forbidden. **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 / working load limit (WLL) and the nominal width of the device.
- **Never** pull or drag loads sideways. Otherwise parts of the device could be damaged. (see Fig. A →)

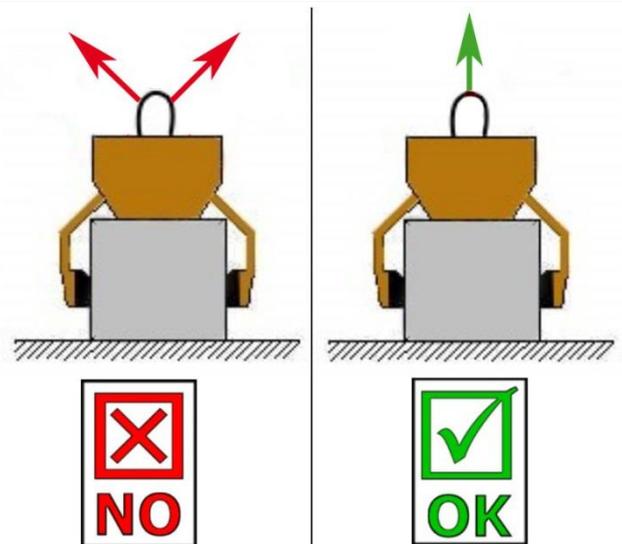


Fig. A

3.5.3 Unauthorized alterations



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

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 Standard flange plate

The device is attached to the lifting equipment/carrier with a standard flange plate or a custom made flange plate connection.

Attaching the device to the lifting equipment/carrier take care that all local safety regulations are observed.

4.1.2 Lifting eye / Suspension bolt

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



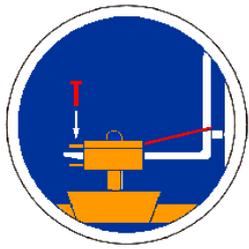
- Take care that the lifting eye / suspension bolt is safely joined with the lifting tackle (e.g. crane hook, belt) and cannot slide down.

4.1.3 Fork sleeves (optional)

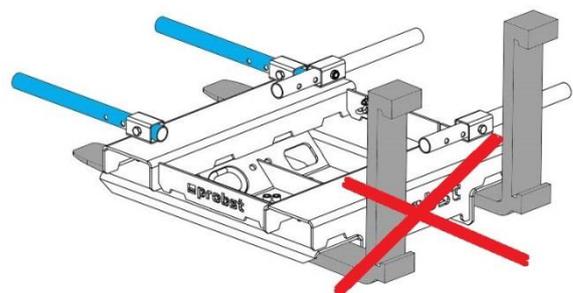
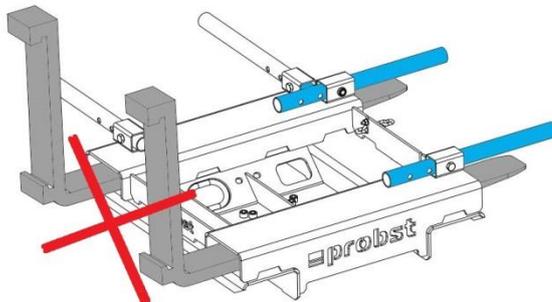
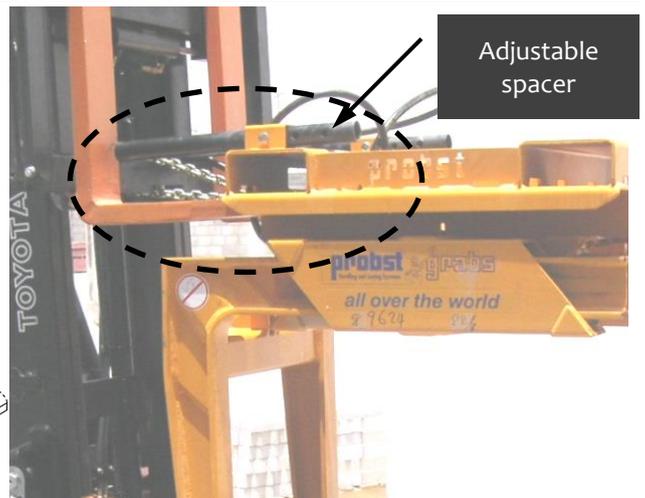
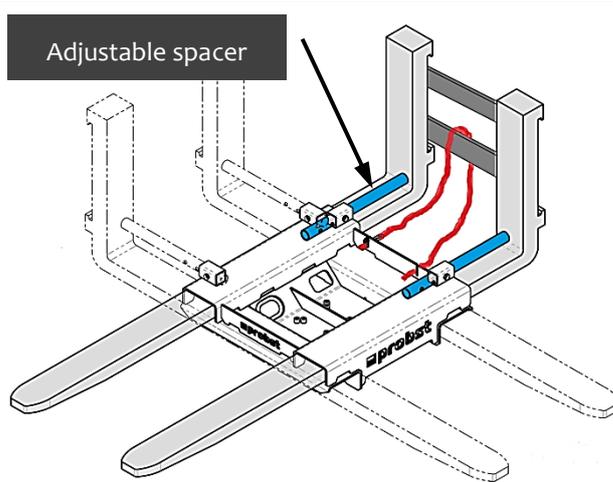
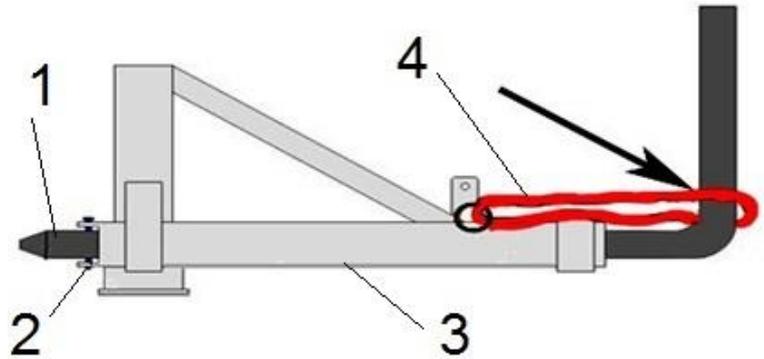
- To establish a mechanical connection between the fork lift and the fork sleeve you have to put the fork into the fork sleeve and fix it with the locking bolt or with a chain/rope, connected to the eyelet on the fork sleeves and the lift frame.



- 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



5 Operation

5.1 Device operation

- Connect the device (KIG 2) with the lifting equipment. The lifting equipment must be adjusted with carrying capacity of the device (KIG 2)!
- Move the device (KIG 2) slowly down into the gripping good (cone), until the rectangular tube lays on the gripping good (cone). **Take care of stirrups!**
- Lifting the device (KIG 2), the automatic release unlocks and the gripping good (cone) can be lifted.
- Now transport the gripping good (cone) **carefully** to the destination place.
- Setting down the device (KIG 2) the automatic release locks and the device (KIG 2) can be lifted without the gripping good (cone).

5.2 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

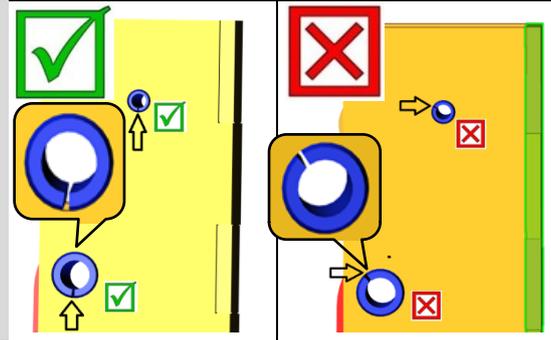
<p>1</p> <ul style="list-style-type: none"> • Device is lifted through the lifting equipment/carrier. • Gripping arms are opened. 	<p>2</p> <ul style="list-style-type: none"> • Device is set up on the gripping good. • Gripping arms are opened. 	<p>3 A</p> <ul style="list-style-type: none"> • Device is 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!



6 Maintenance and care

6.1 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.

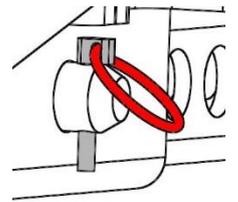
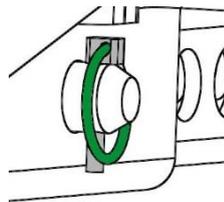


All operations may only be made in closed state of the device!
For all operations you have to make sure, that the device will not close unintended. **Danger of injury!!!**

6.2 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.

6.3 Trouble shooting

ERROR	CAUSE	REPAIR
<p>The clamping-power is not big enough, the load is slipping out (optional) (optional) (Adjustment of the opening width) (optional) (Property of material)</p>	<ul style="list-style-type: none"> • The grippers are worn • The maximum load is exceed • The actual opening width is not correct • The surface of the material is dirty or the material is not suitable / allowed for this device. 	<ul style="list-style-type: none"> • Replace the grippers • Reduce the weight of. the load • Adjust the opening width according to the load you want to transport • Check the surface of the material or ask the manufacturer, if you the material is allowed for this device.
<p>Unbalanced load (Adjustment of the opening width) (optional)</p>	<ul style="list-style-type: none"> • The device is not loaded symmetrically • The adjustment of the opening width is not symmetrical. 	<ul style="list-style-type: none"> • Adjust the position of the load • Correct the adjustment of the opening width
<p>Automatic release does not work mechanical (optional)</p>	<ul style="list-style-type: none"> • Automatic release does not work 	<ul style="list-style-type: none"> • Clean automatic release with high pressure-cleaner • Oil the automatic release (never with grease) • Correct faulty switching (→see chapter “Picture of the automatic release”) • Change the inset of the automatic release

6.4 Repairs

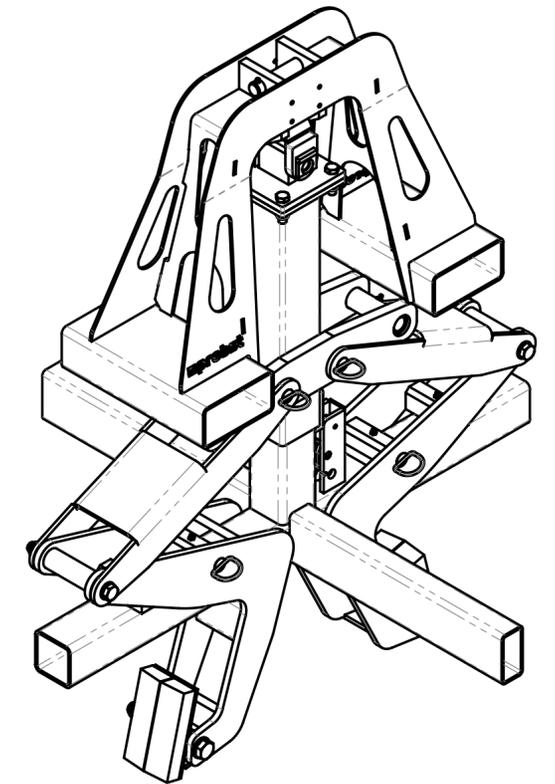
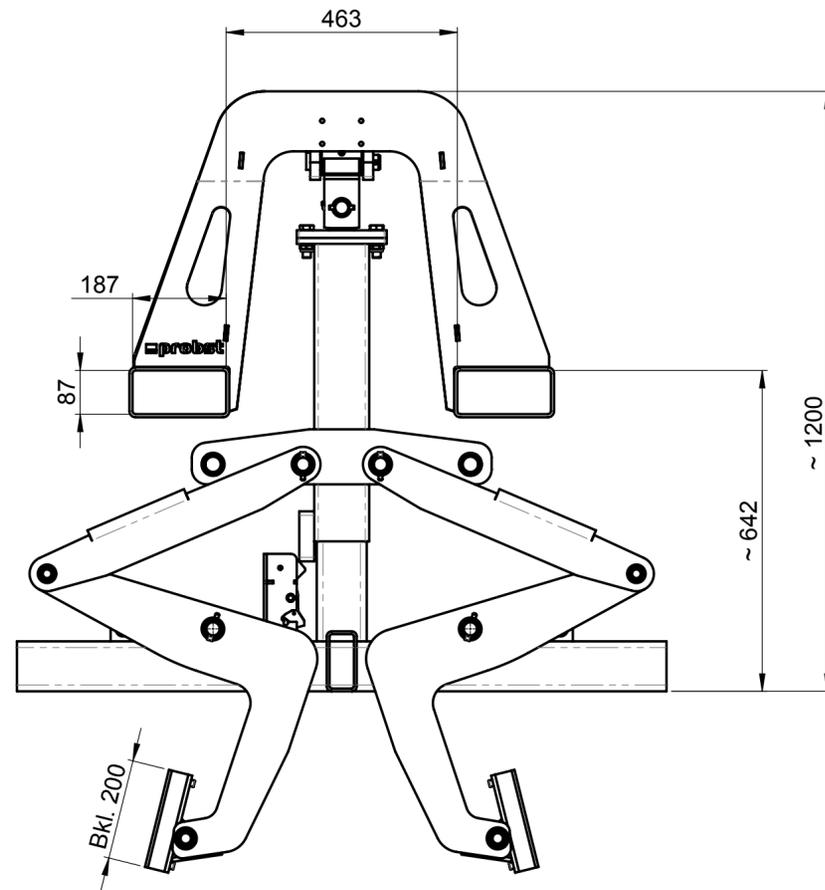
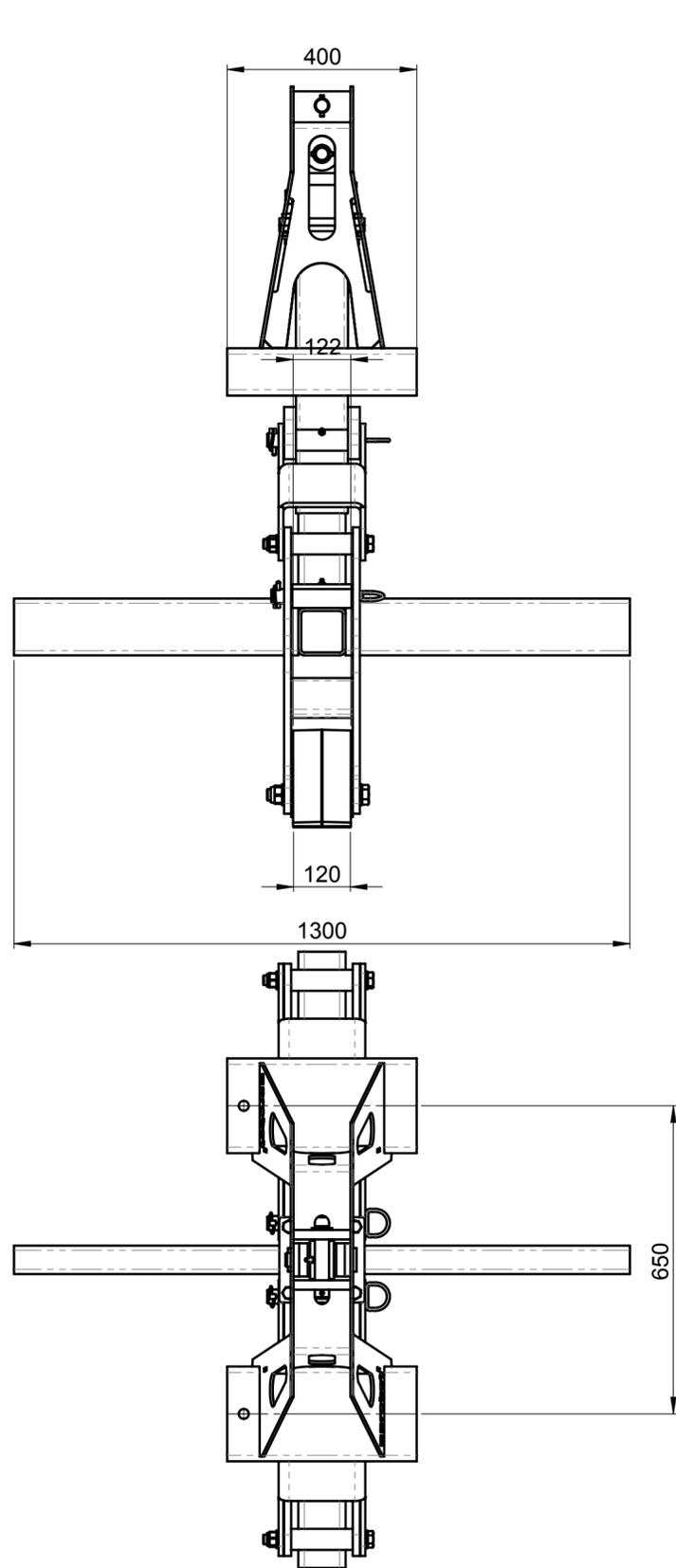


- Only persons with the appropriate knowledge and ability are allowed to repair the device.
- Before the device is used again, it has to be checked by an expert.

6.5 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.





Tragfähigkeit / Working Load Limit WLL:
2.000 kg / 4.400 lbs

Eigengewicht / Dead Weight:
~ 260 kg / ~ 580 lbs

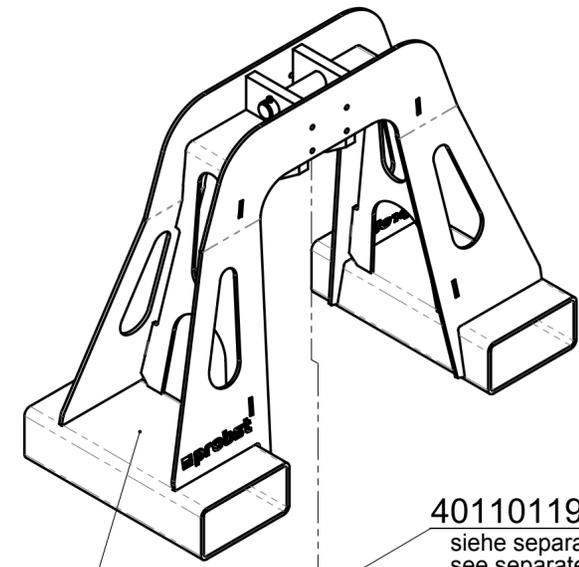
Product Name:
Cone Insert Clamp KIG-II with fork sleeves



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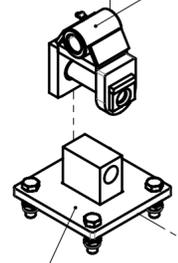
Datum	Name	Benennung
Erst. 19.12.2017	P.Hafenbrak	Koneninnengreifer KIG-II Konus-Deckelöffnung 625 - 1.000 mm Tragfähigkeit / WLL 2.000 kg
Gepr. 19.12.2017	P.Hafenbrak	
Artikelnummer/Zeichnungsnummer		Blatt
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		von 1

Zust. Urspr. 57200067 Ers. f. Ers. d.



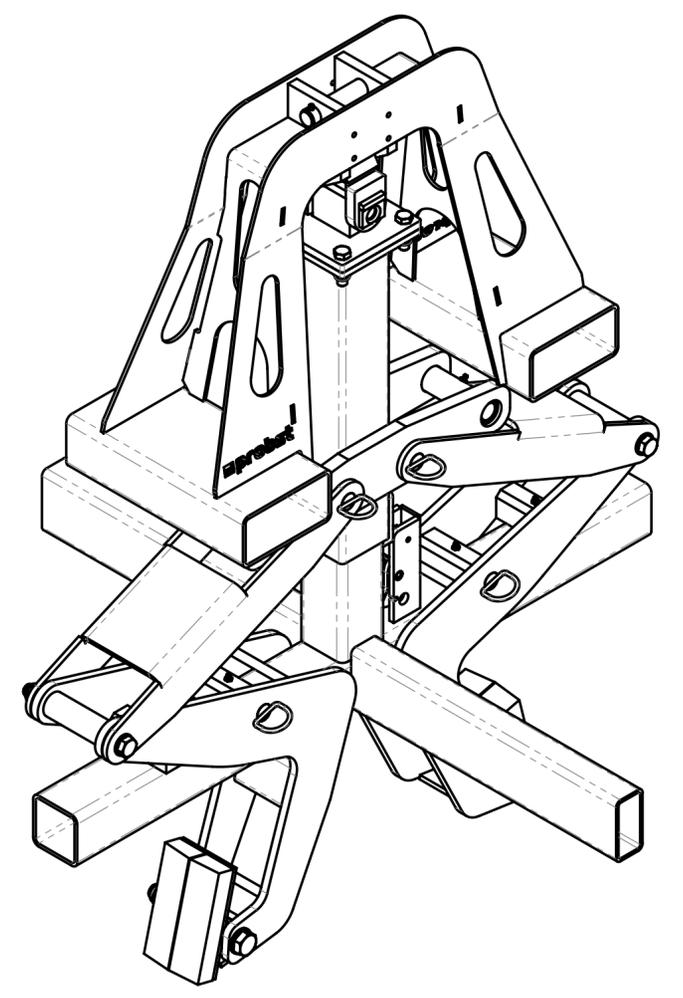
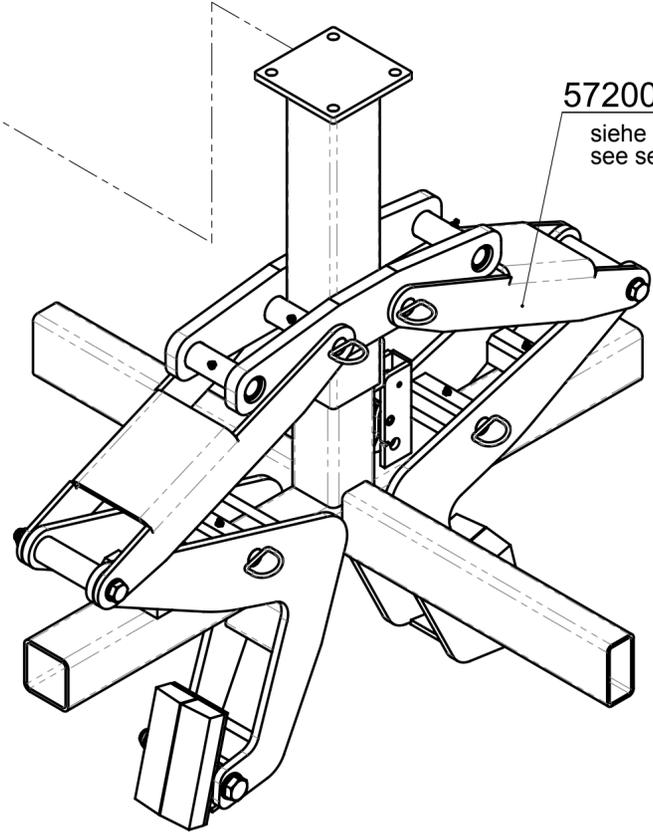
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40110119
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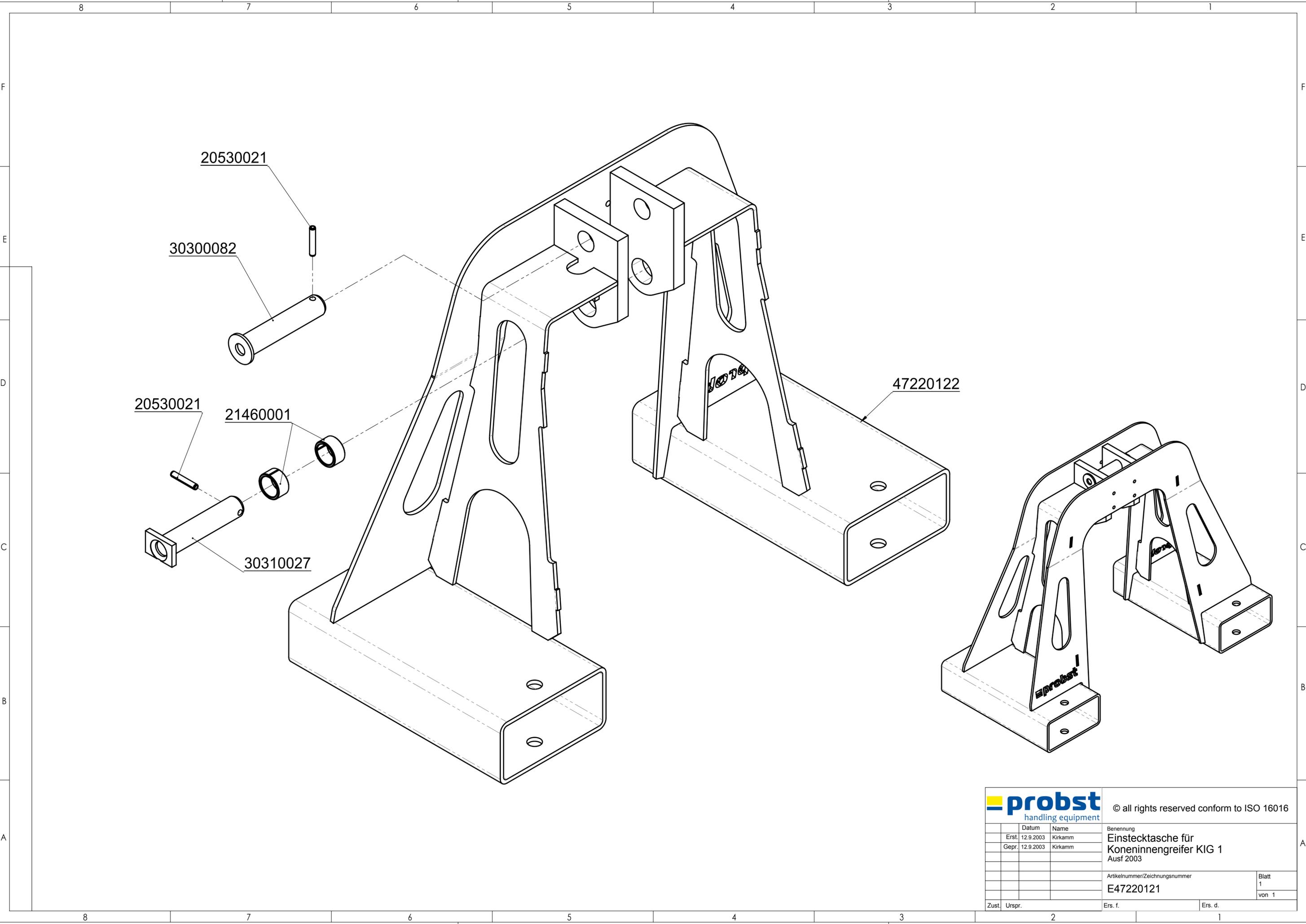
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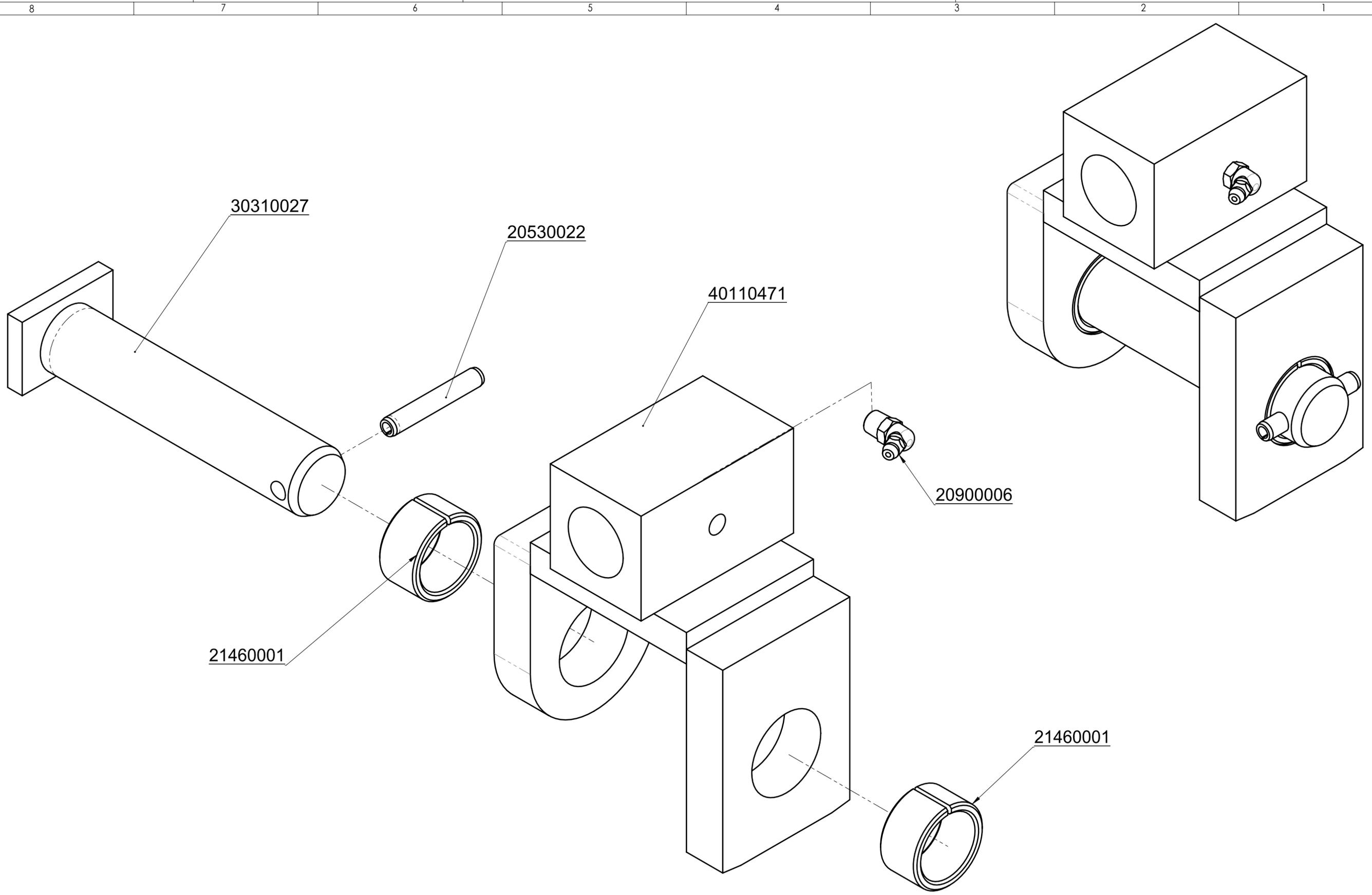


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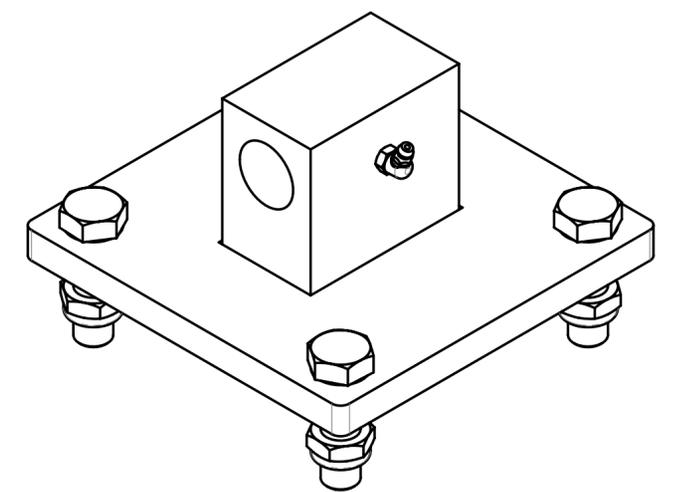
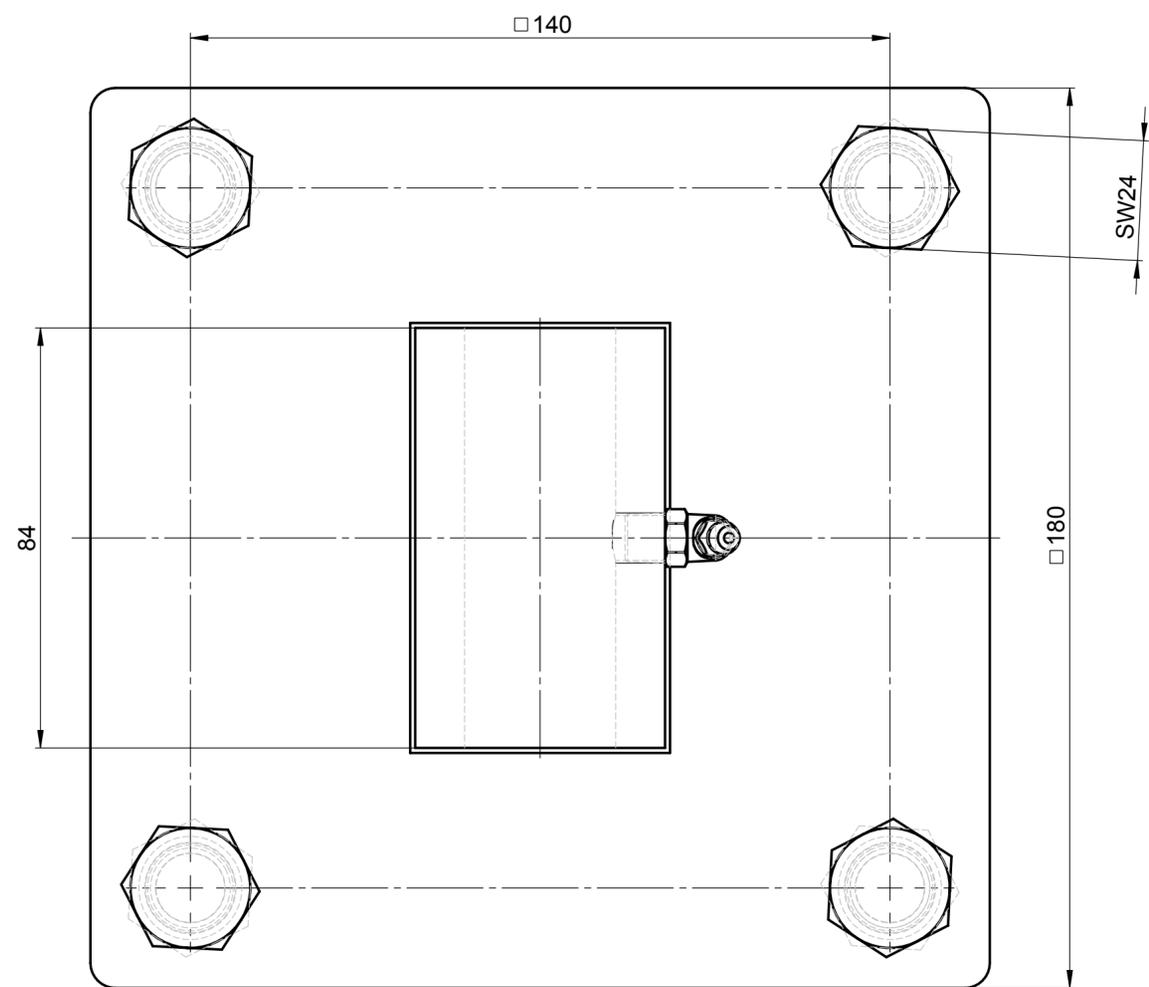
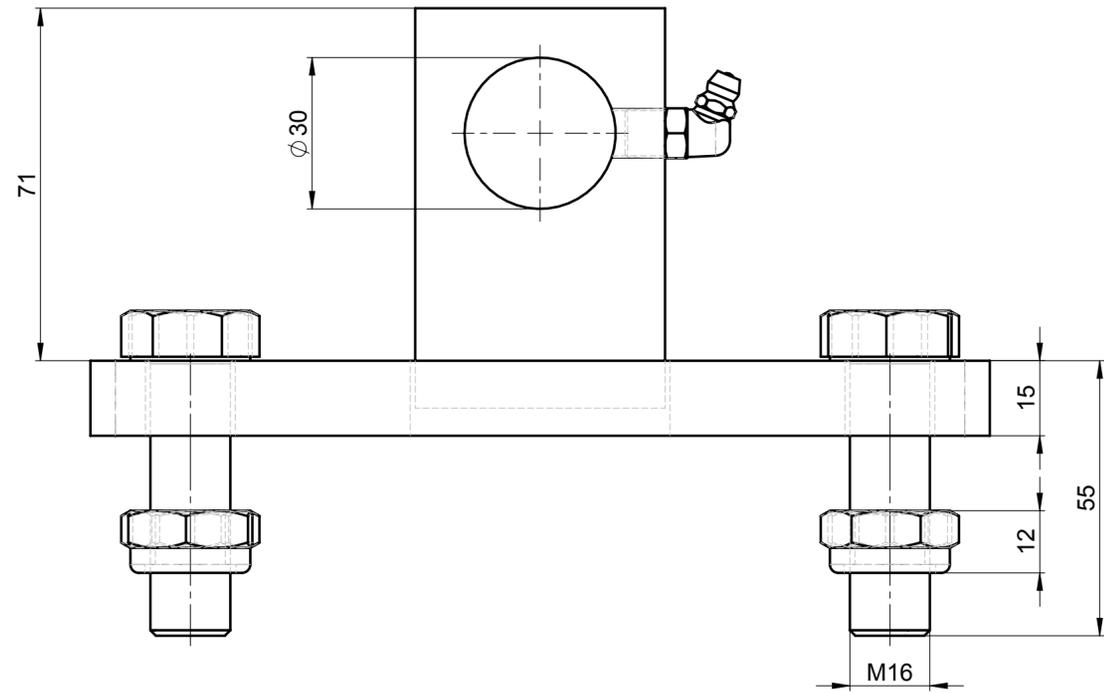
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			Tragfähigkeit / WLL 2.000 kg	
			Artikelnummer/Zeichnungsnummer	Blatt
			E57200208	1
				von 1
Zust.	Urspr. 57200067	Ers. f.		Ers. d.



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	Datum	Name	Benennung
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	Gepr. 12.9.2003	Kirkamm	
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Zust.	Urspr.	Ers. f.	Ers. d.
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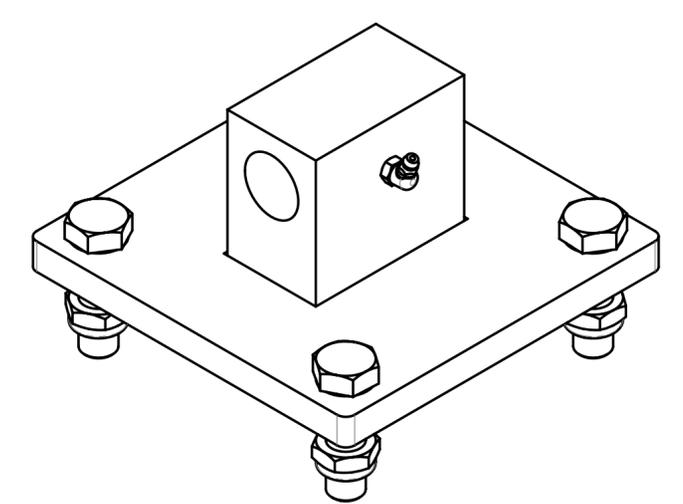
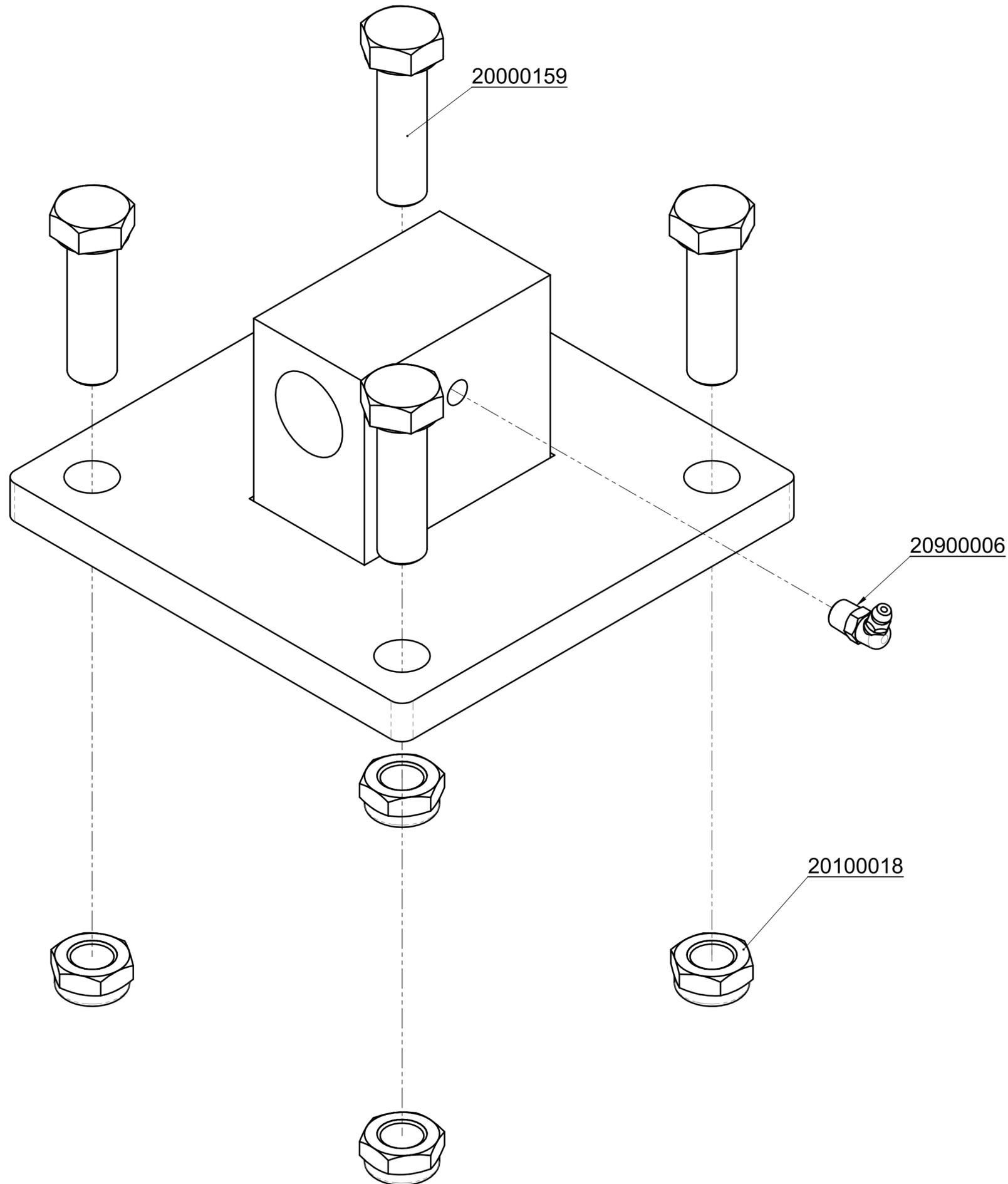


		© all rights reserved conform to ISO 16016	
	Datum	Name	Benennung
	Erst. 21.1.2003	Kirkamm	Kreuzgelenk mit Pendelanschlag schwere Ausführung WLL 4000 kg
	Gepr. 3.4.2017	J.Werner	
			Artikelnummer/Zeichnungsnummer
			E40110119
1			Blatt 1 von 1
Zust.	Urspr. K039-30016	Ers. f.	Ers. d.



Tragfähigkeit / Working Load Limit WLL:
4000 kg / 8816 lbs

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	Datum	Name	Benennung
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	Gepr. 14.2.2017	I.Krasnikov	umgekehrt
			Artikelnummer/Zeichnungsnummer
			D40110059
1			Blatt 1 von 1
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