



Operating Instructions

Translation of original operating instructions

Turning Device for Concrete Pipes

UG-4.5



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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1 EC-Declaration of Conformity

Description: **Turning Device for Concrete Pipes**
 Type: **UG-4.5**
 Order number: 57300025
 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)

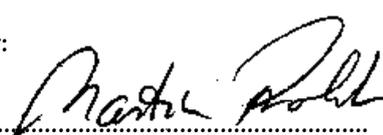
DIN EN ISO 13857

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, 06.08.2018.....

(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>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

2.3 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
	It is not allowed to stand under hanging loads. Danger to life!	2904.0210 2904.0209 2904.0204	Ø30 mm Ø50 mm Ø80 mm
	The transportation of non-rectangular goods is not allowed!	2904.0213 2904.0212 2904.0211	Ø30 mm Ø50 mm Ø80 mm
	Do not lift any components off-centre (always in centre of gravity).	2904.0216 2904.0215 2904.0214	Ø30 mm Ø50 mm Ø80 mm

WARNING SIGN

Symbol	Meaning	Order-No.	Size
	Danger of squeezing the hands.	2904.0221 2904.0220 2904.0107	30 x 30 mm 50 x 50 mm 80 x 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	Ø30 mm Ø50 mm
	Be sure that the fork sleeves are mechanically fixed (with locking screw and safety chain or rope) to the lifting device.	2904.0223 2904.0222	Ø50 mm Ø80 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.

2.8.2 Hydraulic



Check all hydraulic hoses and connection for tightness. Only experts are allowed to replace faulty parts (depressurized)



Ensure a clean working environment before opening the hydraulic connection.



The hydraulic hoses must be free of breaks and abrasion. Take care that there are no outstanding edges, where the hoses could hook in.



The operator of the device is responsible for a constant line pressure, which is necessary for the working with this device.
Only under these conditions is a safety gripping, lifting and transporting of the gripping goods with this device ensured.

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.



- 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 →)

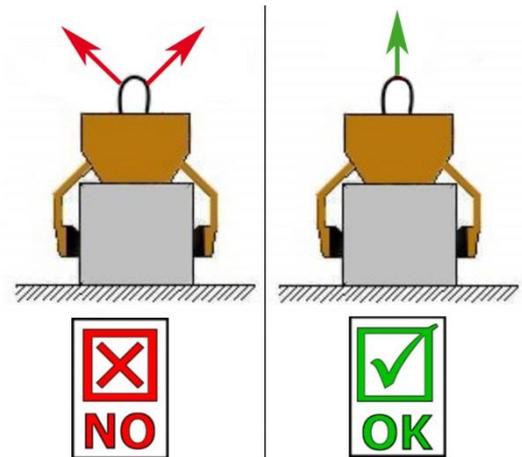


Fig. A

2.9.2 Safety in Hydraulic pressure mode

- The best gripping power will be achieved if the control lever is pressed two more seconds after the gripping (closing action). Subsequent the control lever must be moved back in the neutral position.



- **This valve is adjusted and sealed by the manufacturer (for the maximum hydraulic pressure adjustment). Do not remove the sealing without contacting the manufacturer.**

2.9.3 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!

2.9.4 Overload Protection

As diverse fork lifts have different hydraulic pressures, this device is equipped with an excess pressure valve to avoid excess pressure.

This valve is adjusted and sealed by the manufacturer.



Do not remove the sealing without contact to the manufacturer!

3 General

3.1 Authorized use

The turning device is designed especially for the application on a fork lift.

The turning device is designed for the gentle gripping and turning of concrete pipes with specified dimensions.

Dimensions of the concrete pipes see chapter “Technical Data” / data sheet.

Features of the device:

- Due the large surfaced pressure pads, little pressure is exerted onto the gripping good (concrete pipe), meaning that green gripping goods can be safely handled.
- Low maintenance slide bearings guarantee an optimum sliding of the gripping arms.
- The parallel movement of the gripping arms means little space is required between the gripping goods.
- As the gripping goods are turned in a raised position, there is no danger of damaging the joints or the steel pallets.

The device is connected with screw- or plug coupling over hydraulic hoses to the hydraulic system of the fork lift.

Two hydraulic cylinders generate the clamping pressure.



ATTENTION: The use of this device is only permitted in proximity to the ground (→ chapter “Safety at work”)



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 **conical** gripping goods, because they could **fall down**.



- 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.

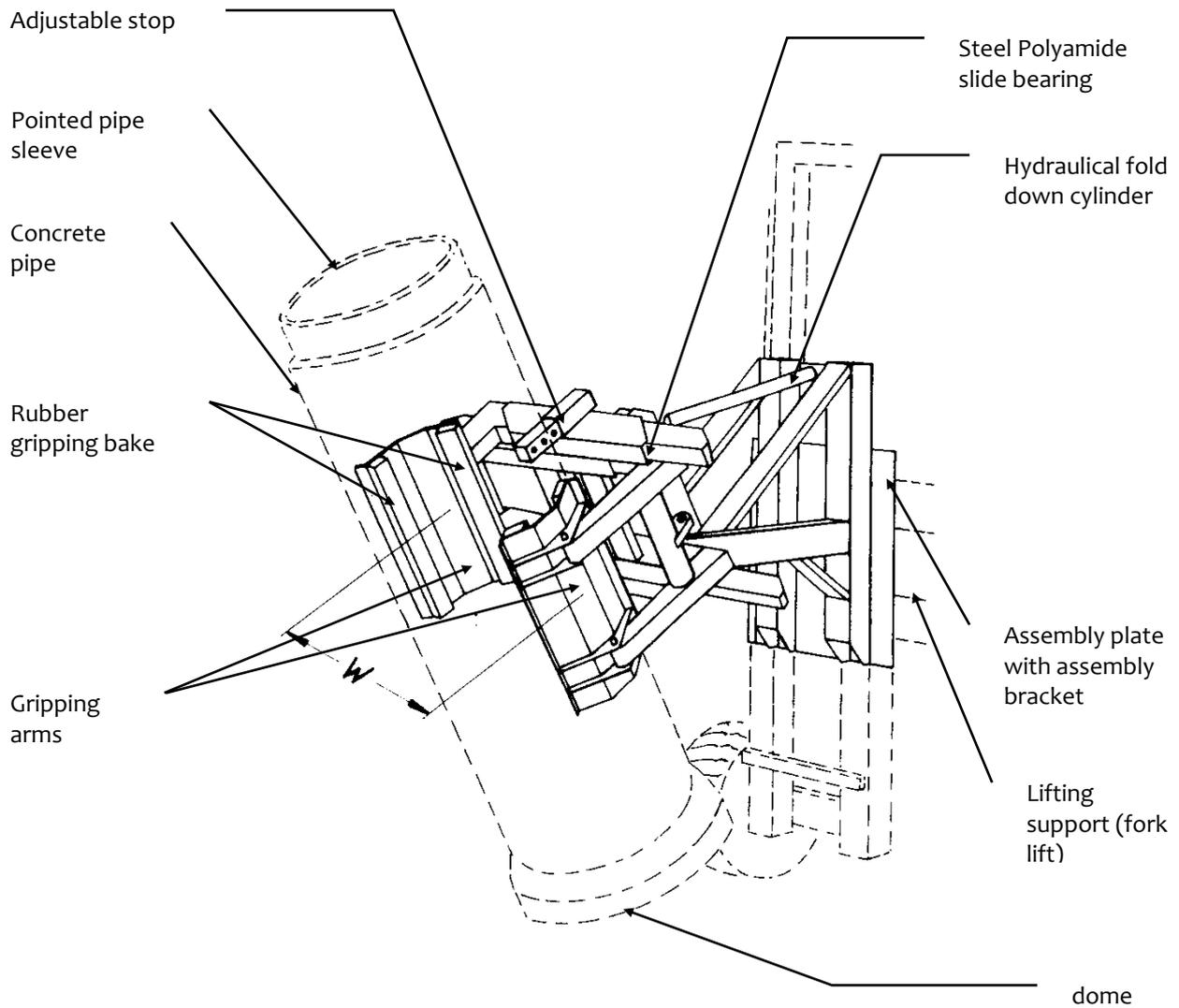


Prior to every operation the user **must** ensure that:

- 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.

3.2 Survey and construction



3.3 Technical data

Type	Suitable for outer-Ø [mm / (in)]	Usual trade opening range (NW) [mm / (in)]	Carrying capacity [kg / (lbs)]	Dead weight [kg / (lbs)]
UG-4,5	400 - 1.580 mm (15¾" - 62¼")	300 - 1.200 / (11¾" - 47¼")	4.500 kg / (9,900)	1.200 kg / (2,650)

4 Installation

4.1 Mechanical connection

Position the assembly plate of the fork lift beyond the bracket of the device.

Fix the bottom bracket on the assembly plate, by tightening the screws of the bracket, the attachment will be fixed to the assembly plate.



Take care that the maximum capacity of the fork lift through the load of the attachment and the load of the gripping good is not exceeded!

4.2 Hydraulical connection

Connection load	optimum	minimum	maximum
Throughput rate [l/min] (supporting device)	25	15	75
Operating pressure [bar] (supporting device)	200	200	250
Pressure head in retraction [bar]	0	0	5

4.3 Hydraulic connection



To avoid malfunction of the device check all hydraulic connections before starting to work.

- For the actions „device open and close" and "gripping good mounting and folding down" two separate hydraulic circuits are required.
- If there is only one hydraulic circuit on the lifting device (fork lift), then you can split it into two circuits by using an electromagnetic valve ELM-V.
- If there are two hydraulic circuits available on the lifting device (fork lift), then one of them should be connected to the two screw connections, which are located left in the direction of travel. These are responsible for the hydraulic circuit "Setting-up" and "Laying down".
- The connectors of the right side (in travelling direction) are for the hydraulic circuit "Open" and "Close".
- According to the attached hydraulic circuit diagram, a back-pressure-valve block is inserted in the cycle of "open and close", which prevents pressure loss, so the gripping good (concrete pipe) cannot slip from the gripping arms.

4.4 Warning device

- For visual warning there is a pressure gauge installed, which is visible from the driver's seat of the lifting device (fork lift).

5 Operation

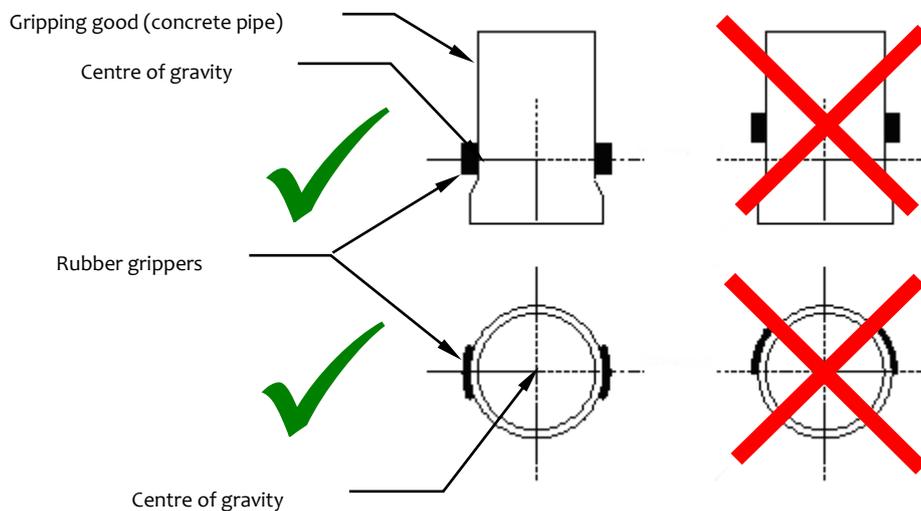
5.1 Device operation



Do not grip gripping goods (concrete pipes) off-centre!



It is not allowed to grip conical gripping goods, only cylindrical, because they could slip off! Gripping goods have always to be gripped in the centre of gravity, gripping jaws should never be positioned outside of the centre of gravity!



New (fresh produced) concrete elements have to be cured enough to resist the necessary gripping force.

5.2 Device operating

- On the first use, feel your way slowly with the device.
- The functions "Open, Close and Turn" of the device are activated by means of the valve control lever located on the fork lift.
- The Close, Open and turning movements take place so long as the valve control lever is operated.



- Under no circumstances should the spring loaded returning control lever be released quickly. One should return it slowly to its original position, because pressure surges may occur in forward and backward movements, which may lead to slackening of the tension.

- **Carefully** drive with the fork lift onto the gripping goods.



- When gripping upright gripping goods (pipes), always make sure to position the lower edge of gripping jaws above the dome (centre of gripping jaws is placed on the centre of gravity of the pipe). Otherwise the gripping good may collide with the fork lift mast while turning.
- **Never** grip pipes, which are shorter than the length of the gripping jaw of the device, otherwise the jaws are not evenly loaded and can deform.
- Drive the gripping goods securely to the next destination and set them down **carefully**.
- By setting down and picking up of the gripping goods make sure there is **enough clearance** between the products at the side in order to have access with the gripping arms.

5.3 Adjustment options

When the Turning Device is equipped with a mechanical adjustment (optional), other opening widths or rather opening ranges are possible.

These can be adjusted as follows:

- Remove the linch pin from the locking pin
- Remove the locking pin
- Align the appropriate hole on the flat bar welded on the hydraulic cylinder to the mounting of the device
- Plug in the locking pin
- Attach the linch pin

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 unpressurised, electro less and closed state of the device!

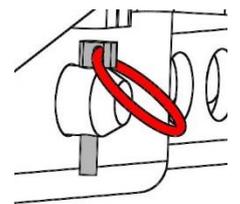
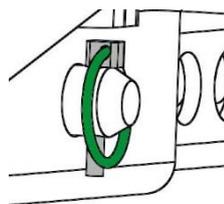
For all operations you have to make sure, that the device will not close unintended.

Danger of injury!!!

6.1.1 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)



6.1.2 Hydraulic

Service interval	Maintenance work
First inspection after 25 operating hours	<ul style="list-style-type: none"> Control and tighten all hydraulic thread joints and connection. (The implementation is only allowed by an expert).
All 50 operating hours	<ul style="list-style-type: none"> Tighten all hydraulic connections. Check the hydraulic system for leaks. Check the hydraulic oil filter, clean it if necessary (if available). Check the hydraulic oil and replace it in accordance to the manufacturer information (recommended hydraulic oil: HLP 46 according to DIN 51524 – 51535). Check the hydraulic hoses for breaks and abrasion.

Only specified types of oil may be used!

6.2 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 opening width) (optional)	The actual opening width is not correct	Adjust the opening width according to the load you want to transport
(Pneumatics / Hydraulics) (optional)	The working pressure is not big enough	Adjust the working pressure (see technical data)
(Electrics) (optional)	The electric motor is faulty.	Check the electric motor
(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.
The clamping-power is fading		
(Pneumatics / Hydraulics) (optional)	The system is not tight	Check all Connections , fittings, pipes and hoses.
	The cylinder can not control the pressure.	Check the seal kits of the cylinders
	The valves are faulty.	Check the valves
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 rangeh is not symmetrical.	Correct the adjustment of the gripping range
The gripping arms are not working synchronous		
(Rack gear adjustment) (optional)	The rack gear adjustment is faulty	Check the rack gear adjustment and repair it
(Pneumatics / Hydraulics) (optional)	The dividing valve is faulty	Check the dividing valve

6.5 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.

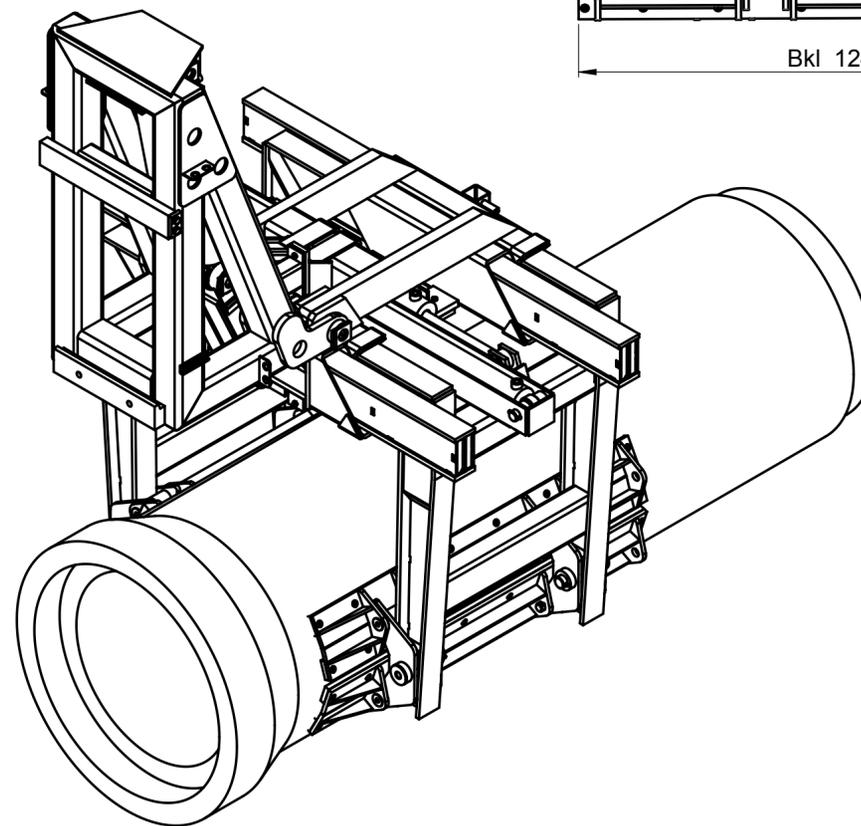
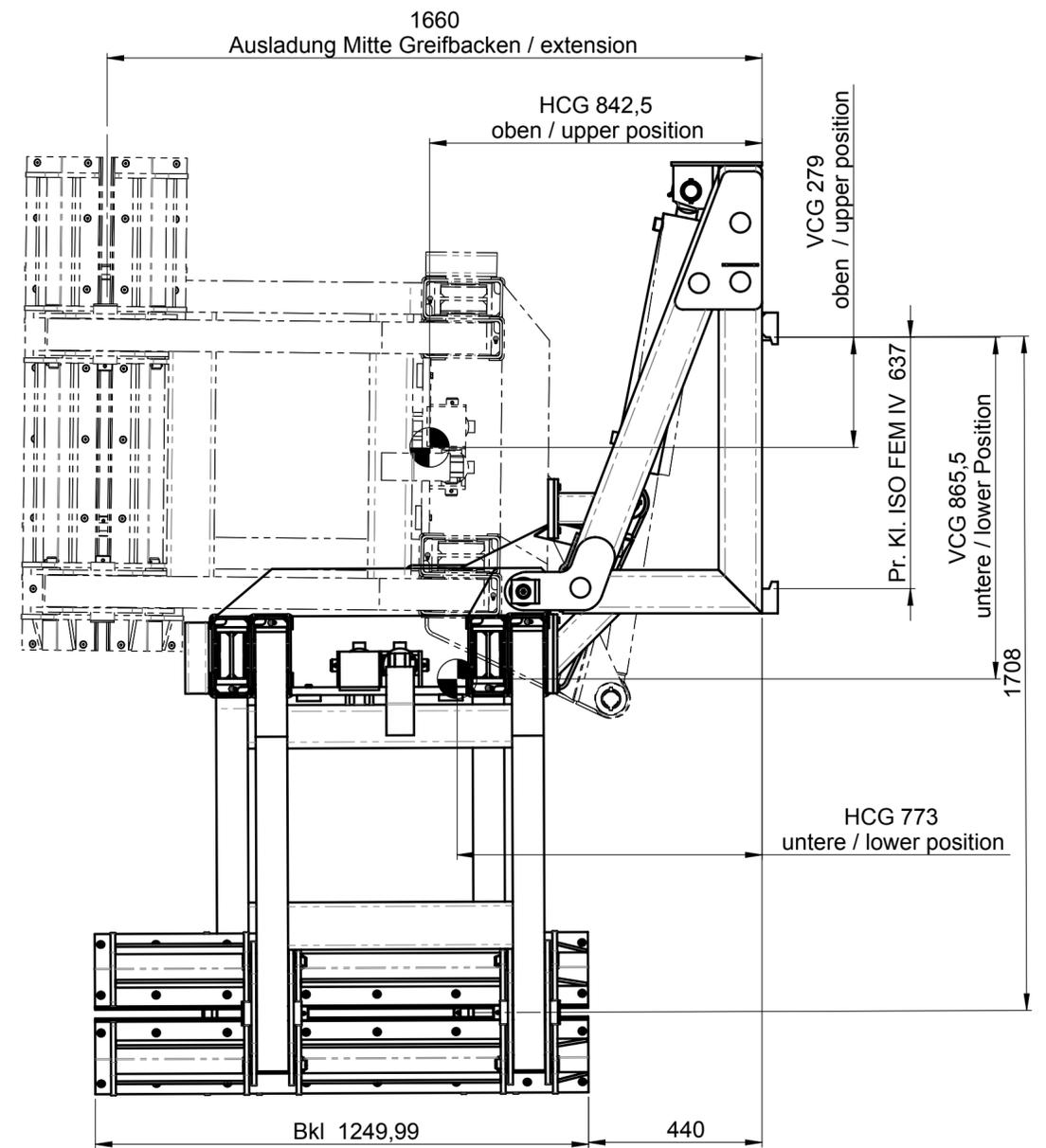
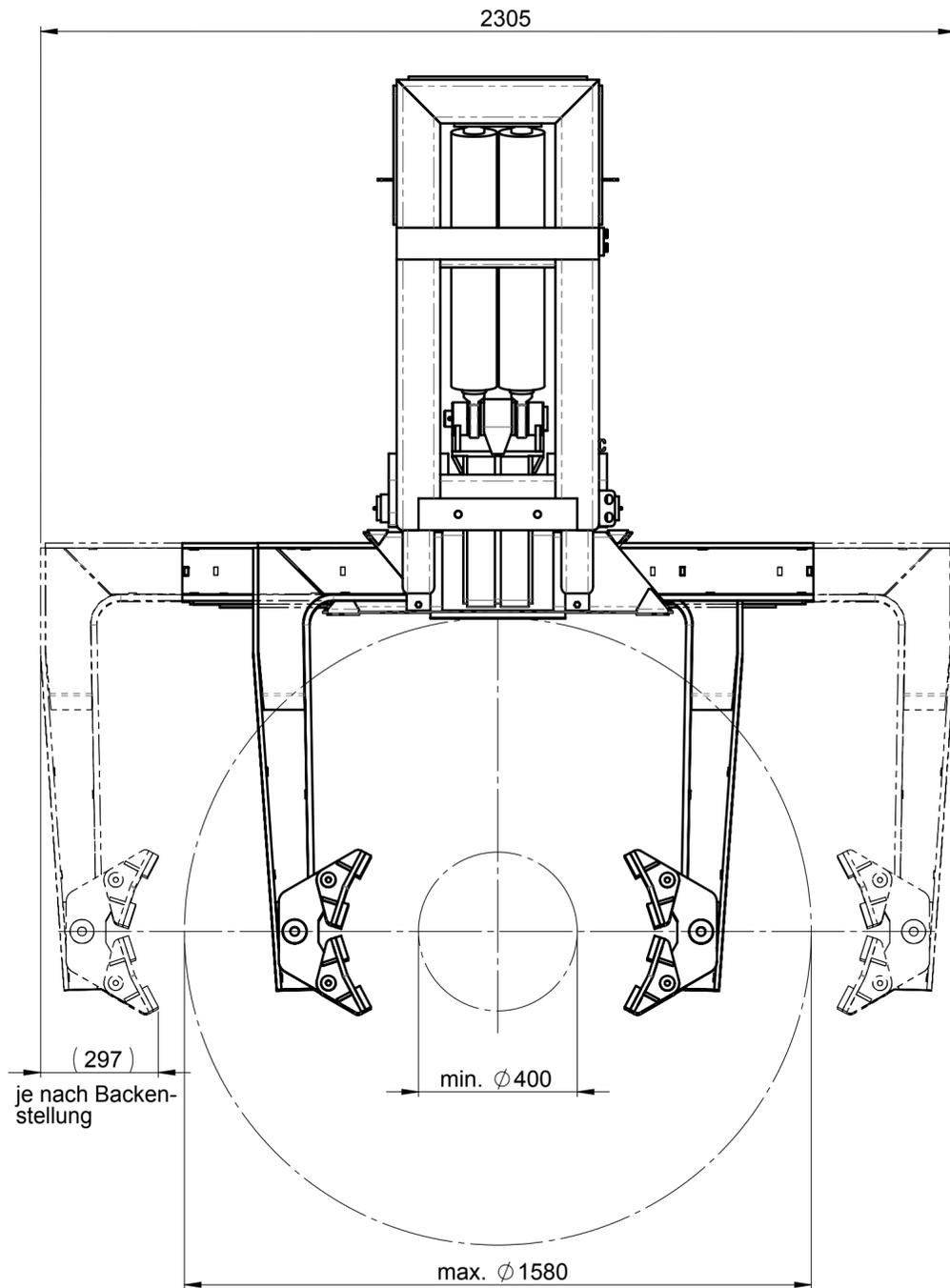


Example:

6.6 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)!



HCG horizontal center of gravity
 VCG vertical center of gravity

Tragfähigkeit / Working Load Limit WLL:
 4500 kg / 9918 lbs

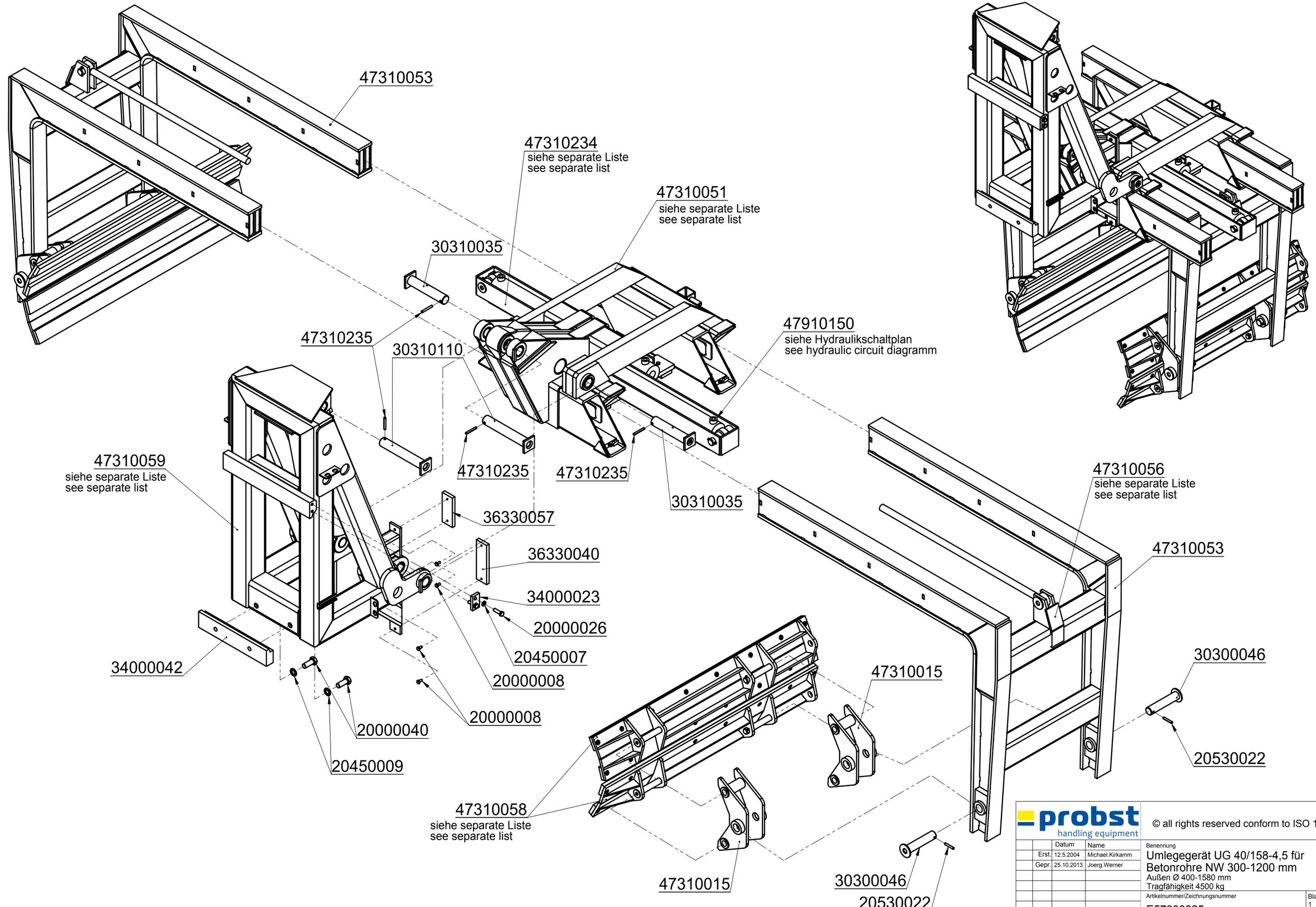
Eigengewicht / Dead Weight:
 1200 kg / 2645 lbs

Product Name:
 Turning Device UG-4,5-40/158 for concrete pipes



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Datum	Name	Benennung
Erst. 30.1.2004	Michael.Kirkamm	Umlegegerät UG 40/158-4,5 für Betonrohre NW 300-1200 mm Außen Ø 400-1580 mm Tragfähigkeit 4500 kg
Gepr. 18.7.2014	Joerg.Werner	
Artikelnummer/Zeichnungsnummer		Blatt
D57300025		1
Zust. Urspr.		von 1
Ers. f.		Ers. d.



47310053

47310234
siehe separate Liste
see separate list

47310051
siehe separate Liste
see separate list

30310035

47910150
siehe Hydraulikschaltplan
see hydraulic circuit diagramm

47310235

30310110

47310059
siehe separate Liste
see separate list

47310235

47310235

30310035

47310056
siehe separate Liste
see separate list

36330057

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36330040

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34000023

20000026

20450007

20000008

47310015

30300046

20000040

20000008

20530022

20450009

47310058
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see separate list

47310015

30300046

20530022

probst
handling equipment

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Datum	Name	Benennung
Erst. 12.5.2004	Michael.Kirkamm	Umlegegerät UG 40/158-4,5 für Betonrohre NW 300-1200 mm
Gepr. 25.10.2013	Joerg.Werner	Außen Ø 400-1580 mm Tragfähigkeit 4500 kg
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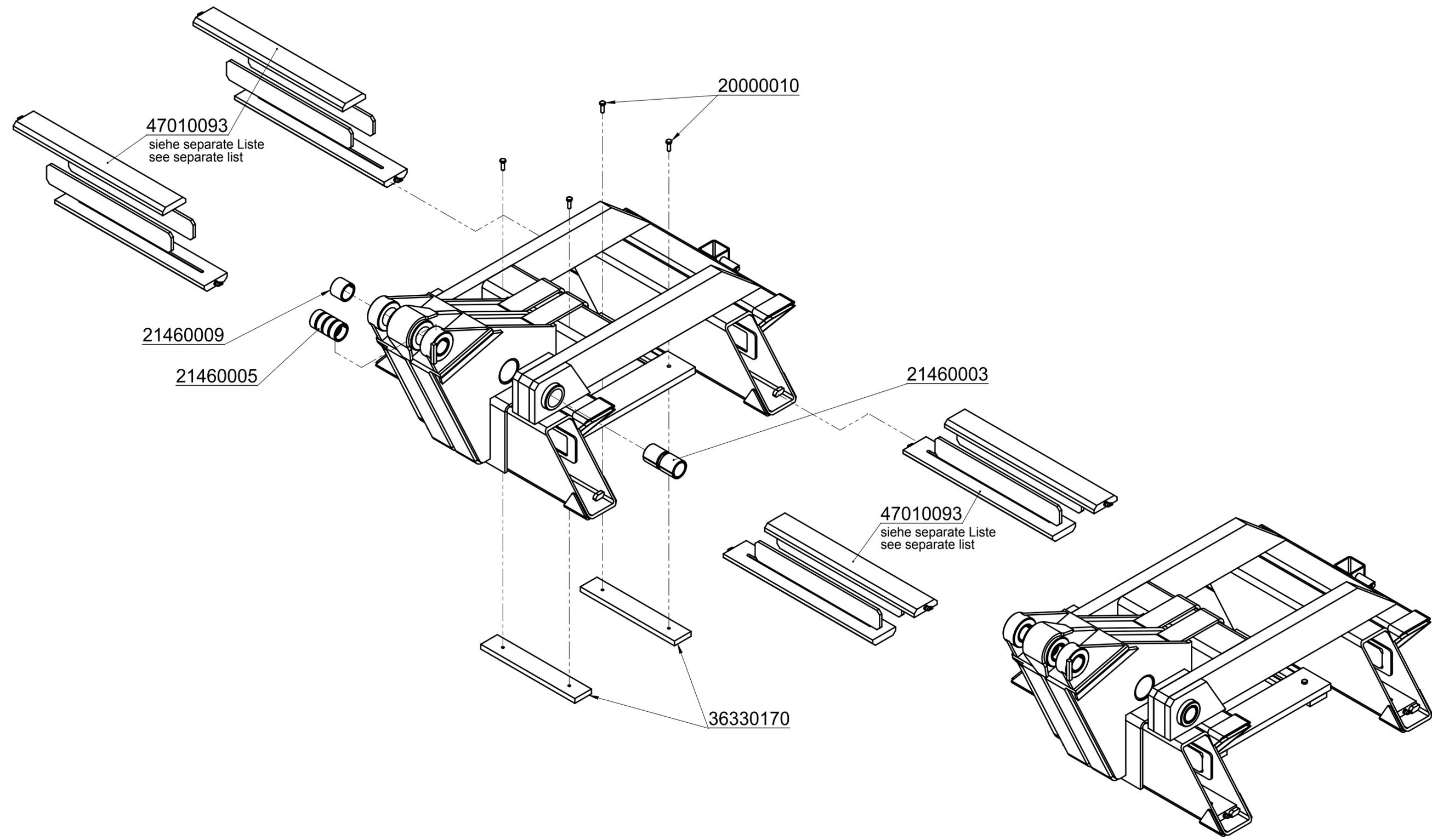
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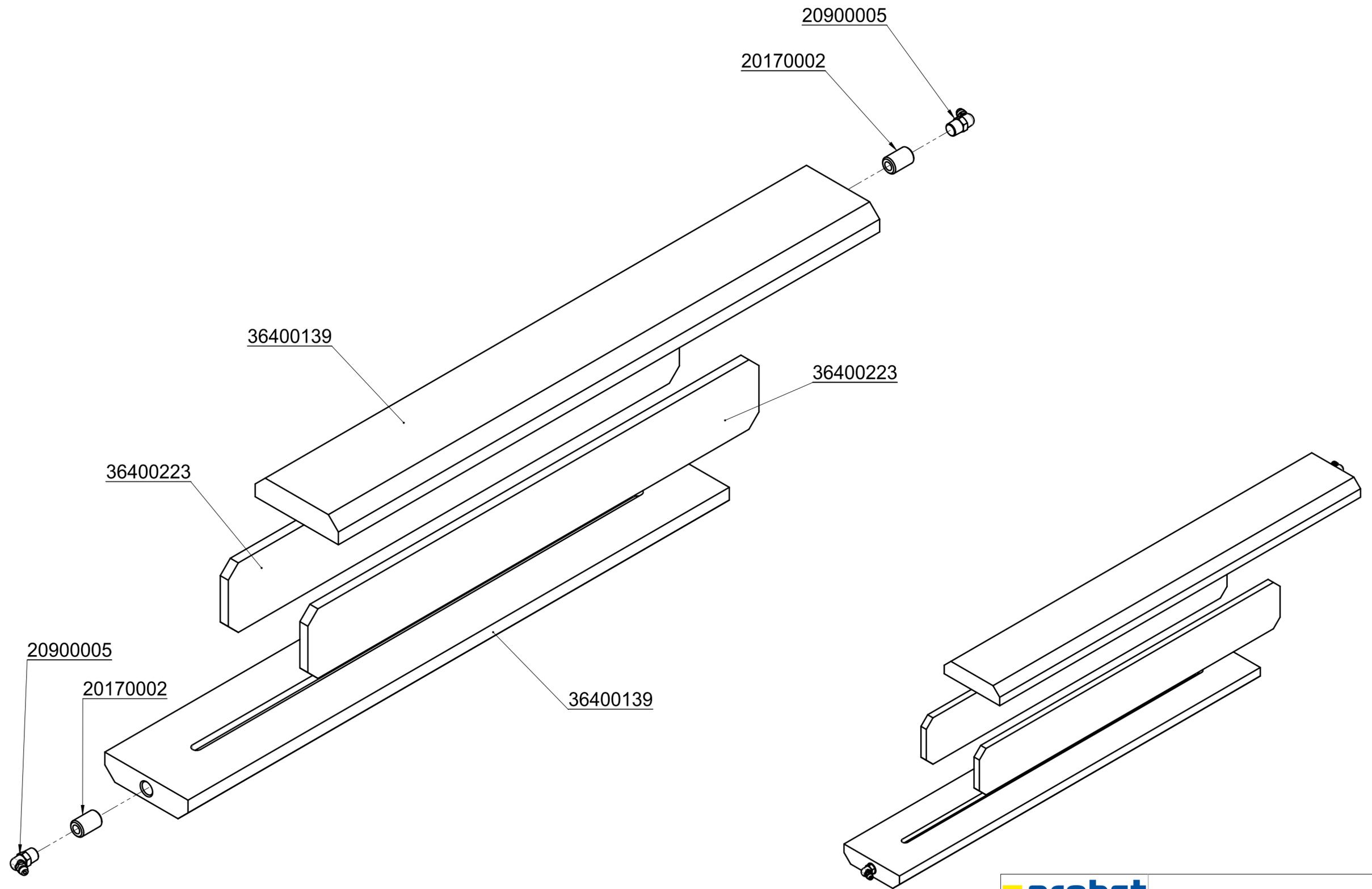
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	Gepr. 21.3.2017	I.Krasnikov	passend zu Stielen I-Profil
			Artikelnummer/Zeichnungsnummer
			E47310051
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Zust.	Urspr.	Ers. f.	Ers. d.

8 7 6 5 4 3 2 1



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Gepr.	21.1.2004	Michael.Kirkamm	
			Artikelnummer/Zeichnungsnummer
			E47010093
Zust.	Urspr.	Ers. f.	Ers. d.
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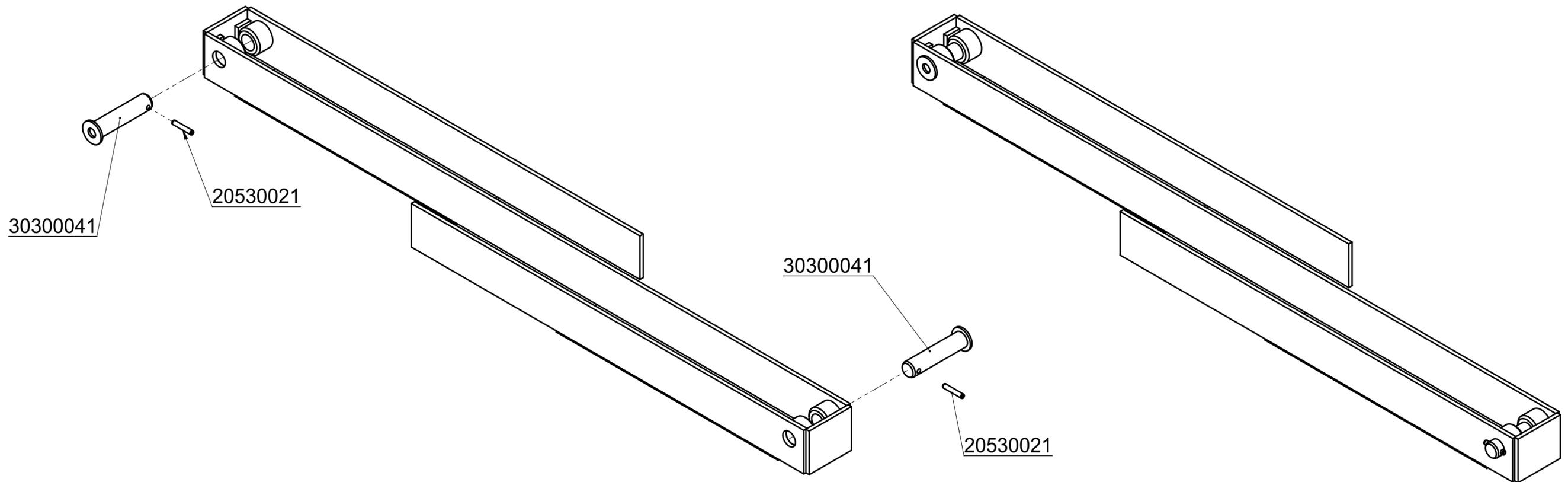
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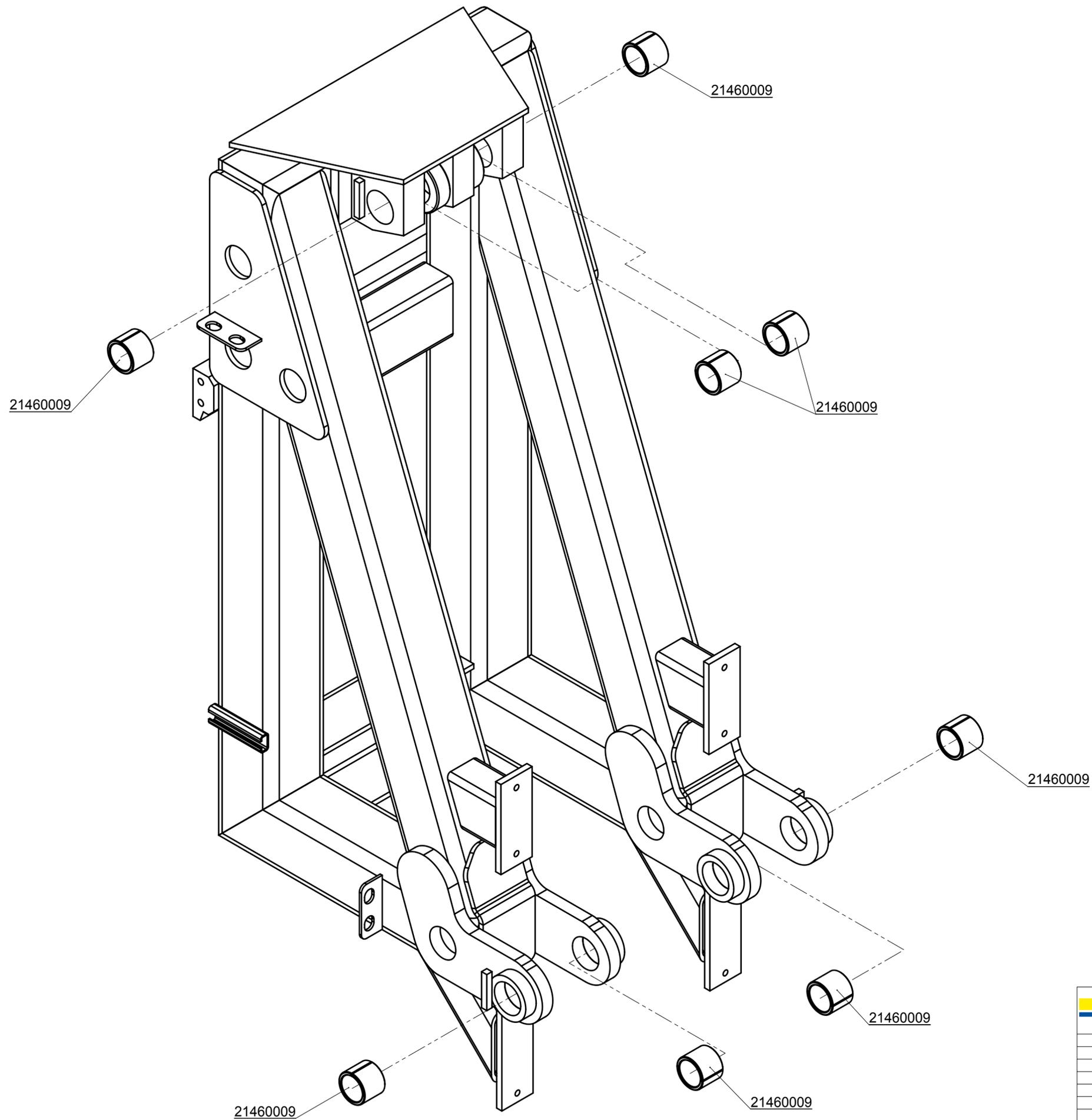
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	Gepr. 4.8.2015	M.Wunder	
			Artikelnummer/Zeichnungsnummer
			E47310234
Zust.	Urspr.	Ers. f.	Ers. d.
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		Benennung	
Erst.	12.5.2004	Michael.Kirkamm	Umlegeinheit zu Umlegegerät UG 4,5 neue Ausführung zu I-Profil-Stielen
Gepr.	31.1.2012	P.Hafenbrak	
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D

D

C

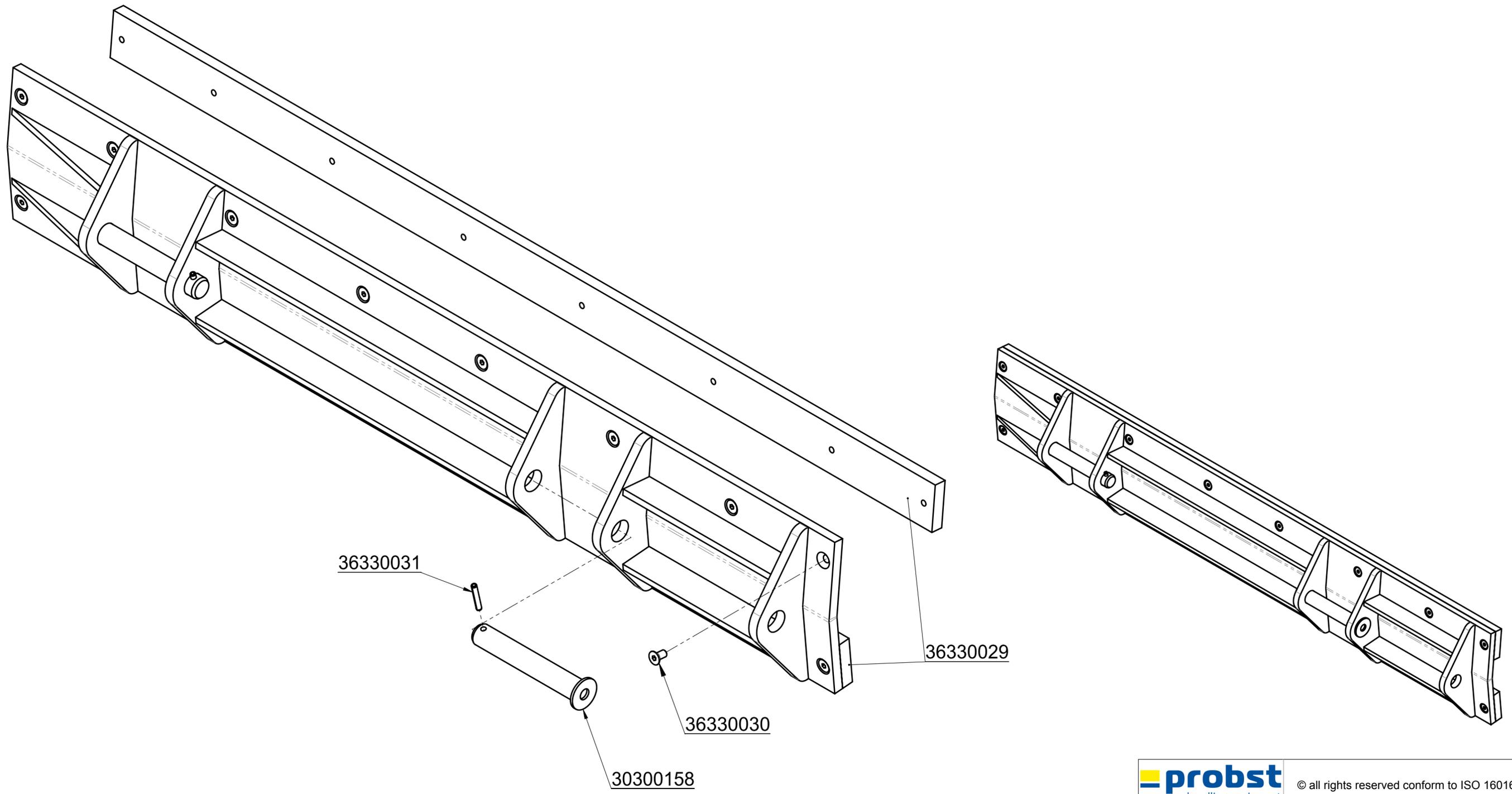
C

B

B

A

A



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	Datum	Name	Benennung
	Erst. 27.1.2004	Michael.Kirkamm	Wippbacken 1250 mm zu Seitenteil UG rechts; (symetrische I-Profil-Stiele)
	Gepr. 27.1.2004	Michael.Kirkamm	
			Artikelnummer/Zeichnungsnummer
			E47310058
Zust.	Urspr.	Ers. f.	Ers. d.
			Blatt 1 von 1

8 7 6 5 4 3 2 1

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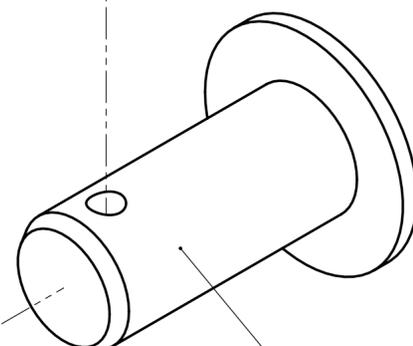
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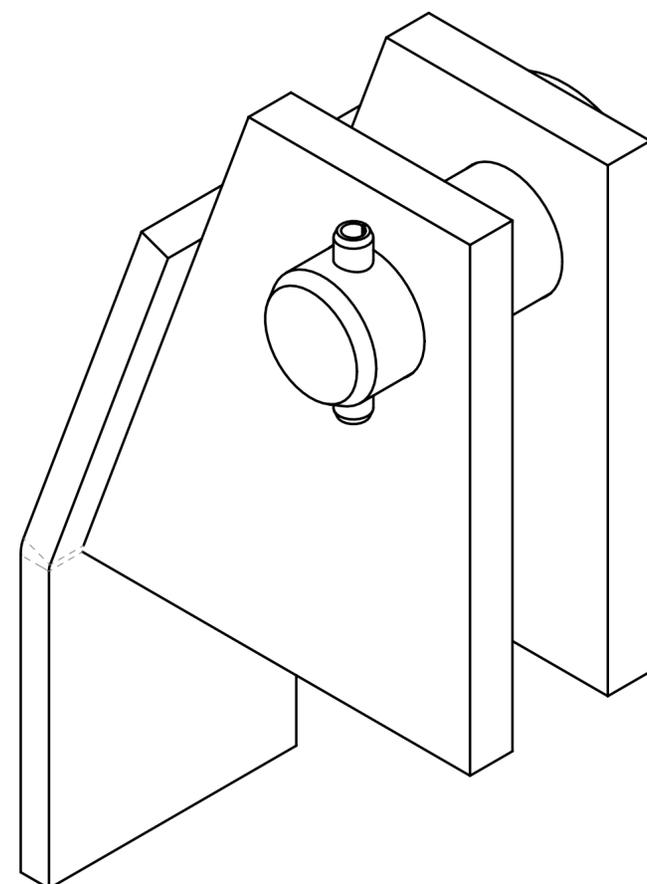
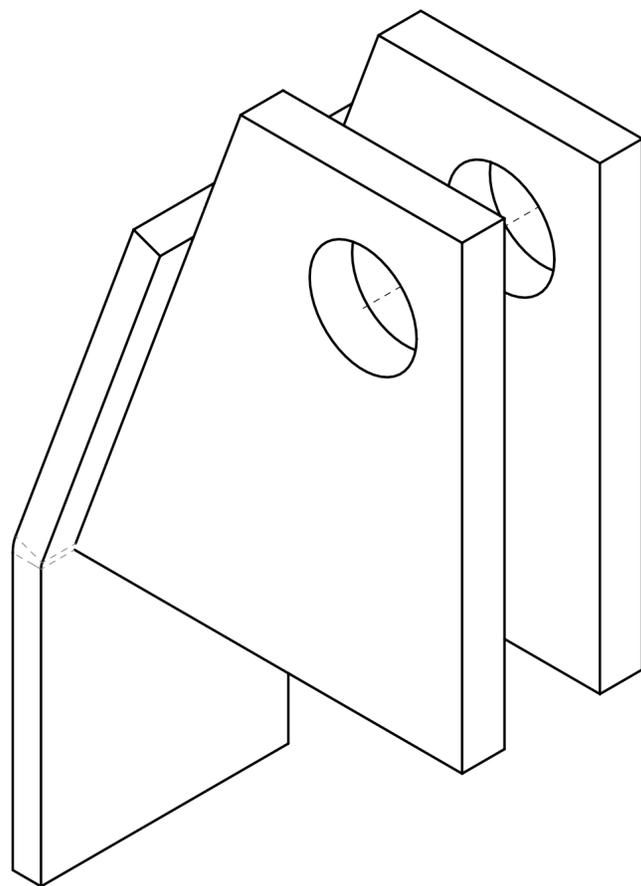
2

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probst
handling equipment

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	Datum	Name
Erst.	10.2.2004	Michael.Kirkamm
Gepr.	10.2.2004	Michael.Kirkamm

Benennung
HD-Zylinderaufhängung inkl. Bolzen Ø30

für Auge 25 breit

Artikelnummer/Zeichnungsnummer

E47310056

Blatt

1

von 1

Zust. Urspr.

Ers. f.

Ers. d.

