



Operating Instructions

Translation of original operating instructions

VACUUM-POWER-HANDY

VPH-150

Contents

| | | |
|----------|--|-----------|
| 1 | EC-Declaration of Conformity | 4 |
| 2 | Safety | 5 |
| 2.1 | Safety symbols | 5 |
| 2.2 | Explanation of basic concepts | 5 |
| 2.3 | Definition skilled worker / specialist | 5 |
| 2.4 | Safety Marking..... | 6 |
| 2.5 | Personal safety requirements | 7 |
| 2.6 | Protective equipment..... | 7 |
| 2.7 | Accident prevention | 7 |
| 2.8 | Safety at work..... | 7 |
| 2.8.1 | General | 7 |
| 2.9 | Function Control | 8 |
| 2.9.1 | General | 8 |
| 2.9.2 | Electric..... | 8 |
| 3 | General..... | 9 |
| 3.1 | Authorized use..... | 9 |
| 3.2 | Survey and construction | 11 |
| 3.3 | Technical data | 11 |
| 4 | Installation..... | 12 |
| 4.1 | Mechanical connection | 12 |
| 4.1.1 | Lifting eye / Suspension bolt | 12 |
| 4.1.2 | Load hook and chains | 12 |
| 4.2 | Assembly of the Wheel Set VPH-RS | 12 |
| 4.3 | Assembly of Stop for Wheel Set VPH-RS-AS | 13 |
| 5 | Adjustments | 14 |
| 5.1 | Adjustment of VPH and the assembly | 14 |
| 6 | Operation | 15 |
| 6.1 | Operating Elements..... | 15 |
| 6.2 | Suction Plate | 15 |
| 6.3 | General | 15 |
| 6.4 | Battery..... | 15 |
| 6.5 | Lifting, Transport and Installation (hoist operation)..... | 16 |
| 6.6 | Lifting, Transport and Installation (manual operation) | 17 |
| 6.7 | Tile laying | 17 |
| 6.8 | Damages of suction plate..... | 18 |
| 7 | Maintenance and care | 18 |
| 7.1 | Maintenance | 18 |
| 7.1.1 | Mechanical | 18 |
| 7.2 | Suction plate | 19 |
| 7.3 | Fault finding | 19 |
| 7.4 | Repairs | 20 |
| 7.5 | Safety procedures | 20 |
| 7.6 | Hints to the type plate..... | 21 |
| 7.7 | Hints to the renting/leasing of PROBST devices | 21 |

| | | |
|----------|--------------------------|-----------|
| 8 | Vacuum pump | 22 |
| 8.1 | General | 22 |
| 8.2 | Safety Advice | 22 |
| 8.3 | Description..... | 22 |
| 8.3.1 | Charge battery | 23 |
| 8.4 | Maintenance | 23 |
| 8.5 | Technical Data..... | 24 |

1 EC-Declaration of Conformity

Description: **VACUUM-POWER-HANDY**
Type: **VPH-150**
Order number: **5271.0008**
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

2014/30/EU (Electromagnetic compatibility)

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)

DIN EN 1012-1 / DIN EN 1012-2

Compressors and vacuum pumps; Safety requirements part 1 and 2.

DIN EN 60204-1 (IEC 60204-1)

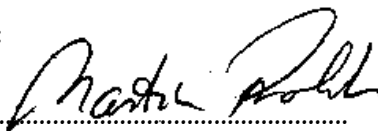
Safety of machinery, electrical equipment of industrial machines. Part 1: General requirements.

Authorized person for EC-documentation:

Name: J. Holderied
Address: Probst GmbH; Gottlieb-Daimler-Straße 6; 71729 Erdmannhausen, Germany

Signature, information to the subscriber:

Erdmannhausen, 11.07.2018.....
(M. Probst, Managing director)

A handwritten signature in black ink, appearing to read "M. Probst", written over a dotted line.

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 |
| | Working with this device is only permitted in proximity to the ground. The sucked load must never be lifted more than 1.8 m (measured from the top edge of the load to the ground). Swinging the device over persons is prohibited. | 2904.0765 | 100 x 70 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 |
| | Loads have to be sucked in centered. With a suitable device (height adjustable stop) loads can also be sucked in eccentrically. | 2904.0744 | 107 x 32 mm |
| | Safety chains has to fit tightly to the load. Safety chains should never hang loosely under the load! | 2904.0690 2904.0689 2904.0688 | 25 x 55 mm 70 x 41 mm 146 x 85 mm |

OPERATING INFORMATIONS

| Symbol | Meaning | Order-No. | Size |
|--------|---|-----------|-------------|
| | Maximum working load limit of the suction plate (VPH-100) | 2904.0575 | 80 x 40 mm |
| | Maximum working load limit of the suction plate (VPH-150) | 2904.0207 | 80 x 35 mm |
| | Label with device title | 2904.0129 | 200 x 50 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 Safety at work

2.8.1 General



- **Working with this device is only permitted in proximity to the ground. The sucked load must never be lifted more than 1.8 m (measured from the top edge of the load to the ground). Swinging the device over persons is prohibited. Danger to life!**

- The manual guiding of is only allowed for devices with handles.
- The operator is not allowed to leave the control unit as long as the vacuum lifting device loaded with load (stone slab). The load must always be in the range of vision of the operator.



- Always keep an eye on the vacuum gauge. Never lift loads when the vacuum is below the required under pressure (mbar). If the pointer of the pressure gauge moves into the red danger zone, **lower the load immediately! Danger! Load could fall down!**



- While using the vacuum lifting device is the stay of persons in the working area forbidden. Except it is indispensable. Caused of the way of using the vacuum lifting device , e.g. if the device must be leaded by hand.



- While using the vacuum lifting device be sure that there are no persons in the working area. **Danger to Life!!**
- The device must never be subjected to a force acting in a lateral direction due to diagonal pulling.
- Do not lift any components off-centre, because that could fall down. **Danger of tilting!**
- Release the load only when it is completely safely resting on the surface. **Keep fingers away from the load when you release it as they can be crushed!**
- The carrying capacity / working load limit (WLL) and the nominal width the vacuum lifting device must not be exceeded.
- Do not pull out stuck or tightened loads with the device.



The jerky raising or lowering of the device with or without load is **prohibited!**
 Unnecessary vibrations must be avoided. Just like driving fast with the carrier/ hoist over uneven terrain!
 Danger to life: Load could fall off or load handling equipment could be damaged!
 In general, only drive at **walking speed** with the load lifted!

2.9 Function Control

2.9.1 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.

2.9.2 Electric



- Check all electric cables for connection
- Defective electrical parts may be exchanged only by **qualified personnel** in the **dead condition**.
- The electric cables must be free of breaks and abrasion. Take care that there are no outstanding edges, where the hoses could get stuck.

3 General

3.1 Authorized use

The device “VACUUM-POWER-HANDY VPH” is only for lifting, transporting and installing natural stone and concrete slabs, large slabs, drain joint stones, steps, as well as tiles **in close proximity to the ground**. The goods to be lifted must have no porous surfaces.

The device is equipped with a suspension lug for crane hook.

The stated maximum load can only be achieved with a vacuum of at least 500 mbar!

The device can only be used in a vertical hanging.



Some of the suction plates, which can be attached to the device, reduce its carrying capacity.
The working load limit (WLL) is stated on each suction plate.
Never exceed the working load limit!



Without additional accessories the device has to be operated by two persons.



With suitable equipment the device can be operated by one person.
For more information see Chapter “Survey and construction”.



- 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:

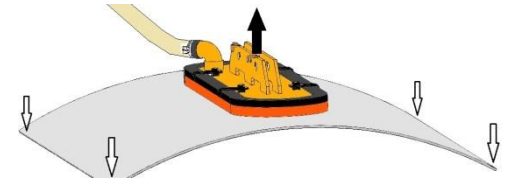
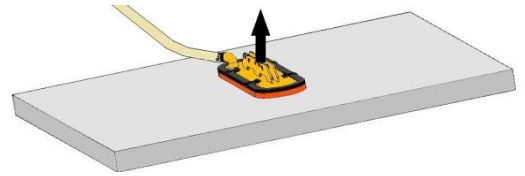
- The equipment is suited to the intended operation, the functioning and the working condition of the equipment is examined, and the load is suitable to be handled.

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 (→ chapter “Safety at work”)

- The load (stone slabs) which is to be sucked and transported, must have sufficient inherent stability, otherwise there is risk of breakage when lifting!
- Stone slabs must not be bend when lifting - especially take care with thin and large-sized stone slabs!
- Generally, the load (stones slab) is only to be sucked in the middle, otherwise the load hangs diagonally under the device and the load could break - especially when lifting large stone slabs with a small suction plate.
- Standard suction plates are not suitable for the transport of glass plates!



Only suction plates of the manufacturer PROBST shall be used!!!



- Some suction plates which can be mounted to the device will reduce its carrying capacity.
The maximum load is indicated on each suction plate.
- Use only suction plates which are **approved** for this device!



Do not exceed the maximum carrying capacity of the suction plates!
Danger: Load (stone slabs) will fall down!



NOT ALLOWED ACTIVITIES:

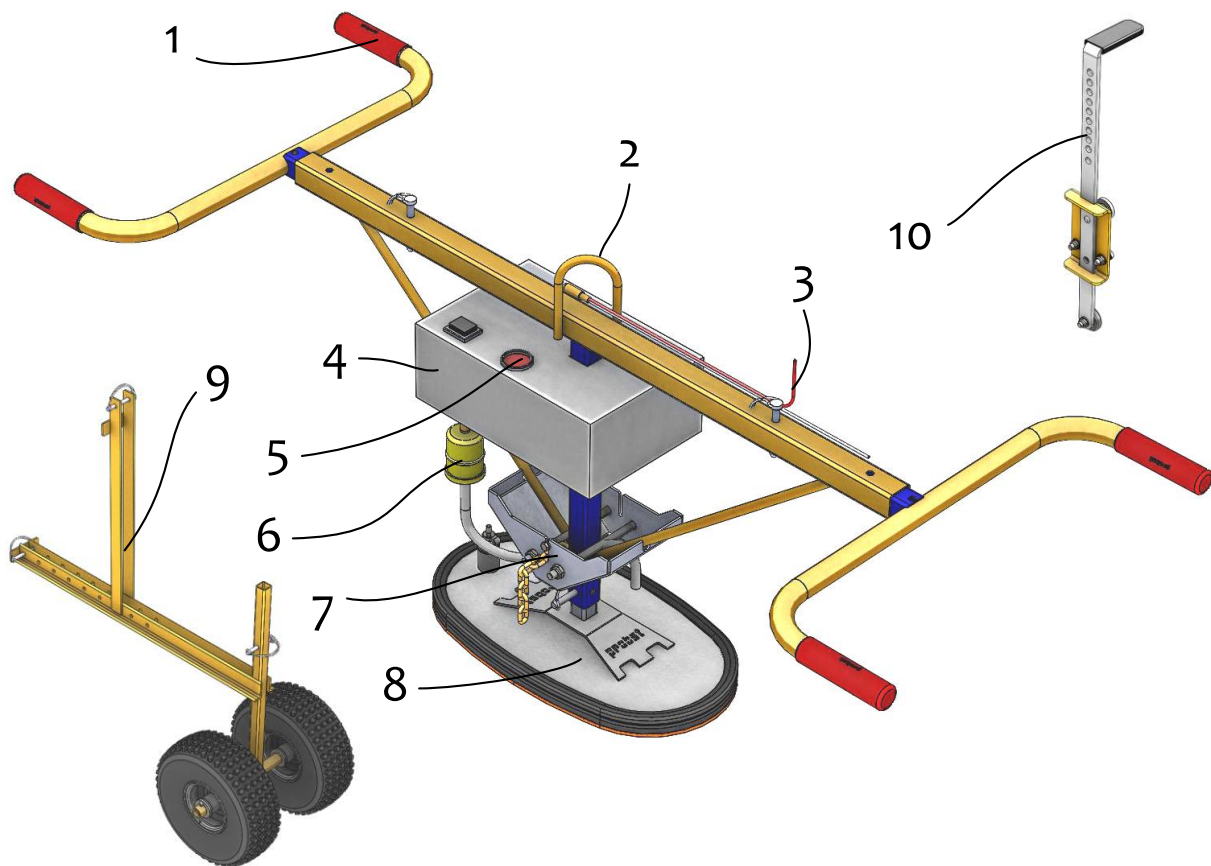
Unauthorized alterations of the device and the use of any self-made additional equipment could cause danger and are therefore **forbidden!**

Never exceed the **carrying capacity** and the **nominal width/nominal size** 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.

3.2 Survey and construction



1. Handle
2. Lifting eye
3. Battery-adaptor cable with terminals
4. Vacuum pump
5. Pressure gauge
6. Air filter
7. Chain box
8. Suction plate
9. Wheel Set VPH-RS, allow to use the device by one person (optionally)
10. Stop for Wheel Set VPH-RS-AS, for large-size tiles (optionally)

3.3 Technical data

| Type | Carrying capacity/WLL [kg] valve at 500 mbar under-pressure | Dead weight [kg] |
|---------|---|------------------|
| VPH-150 | 150 | 19,5 |

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

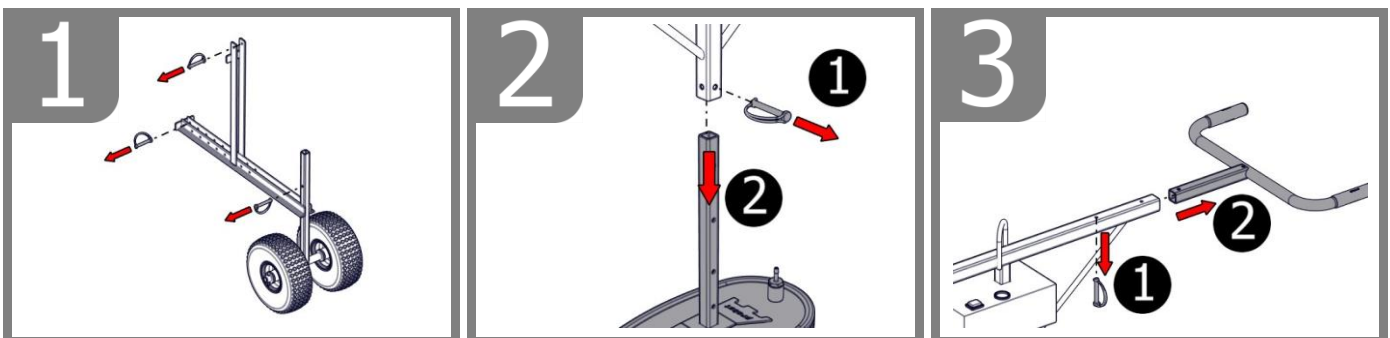


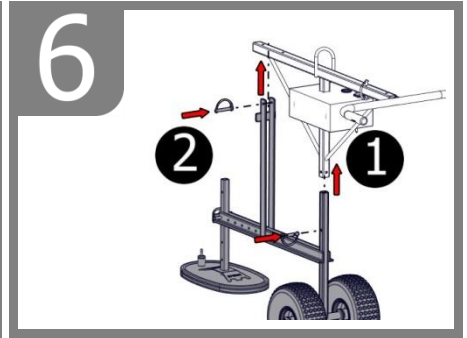
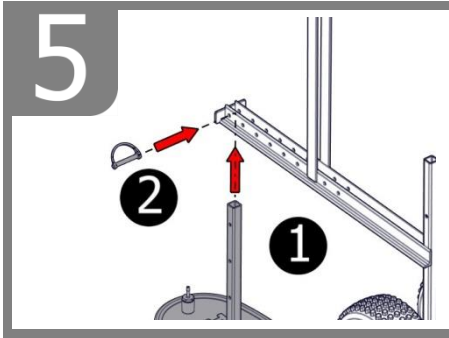
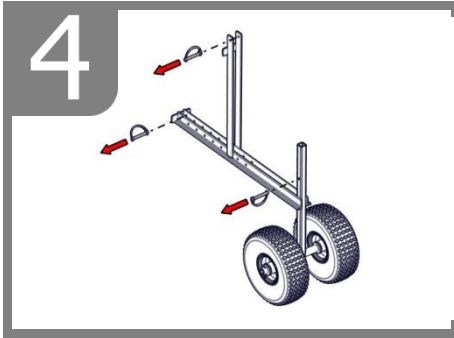
Fit suspension ring in the load hook of the lifting device/carrier.

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

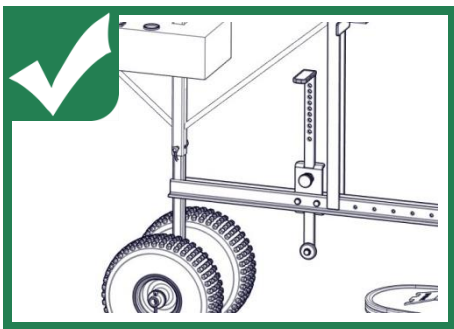
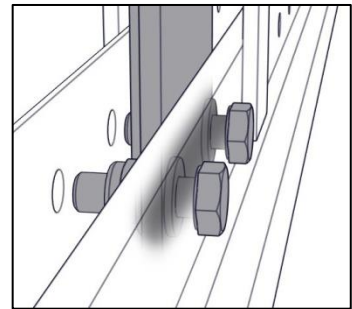
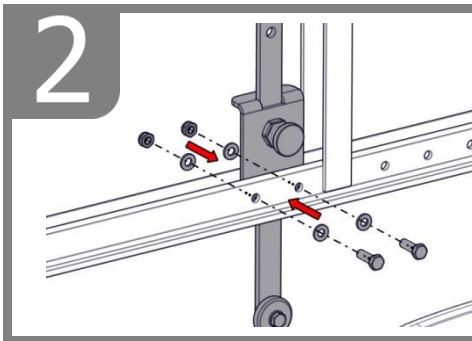
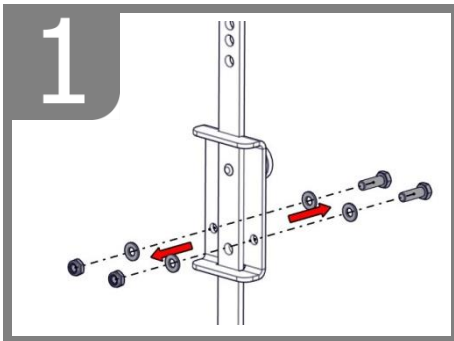
Attaching the device to the lifting device/carrier, take care that all local safety regulation is observed.

4.2 Assembly of the Wheel Set VPH-RS



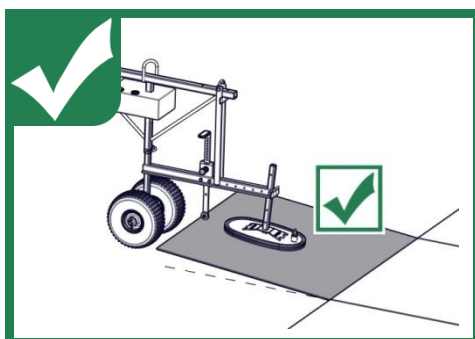
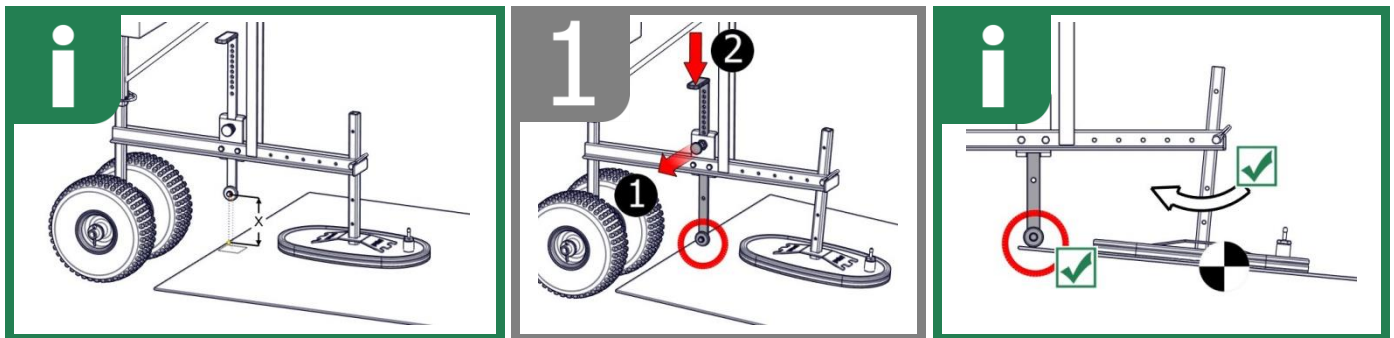
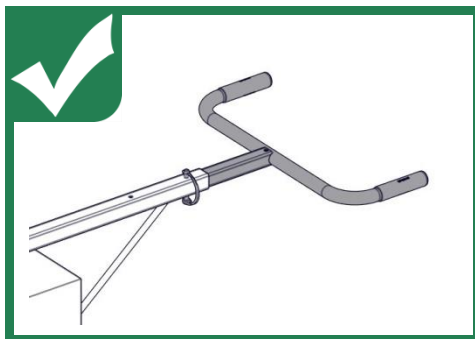
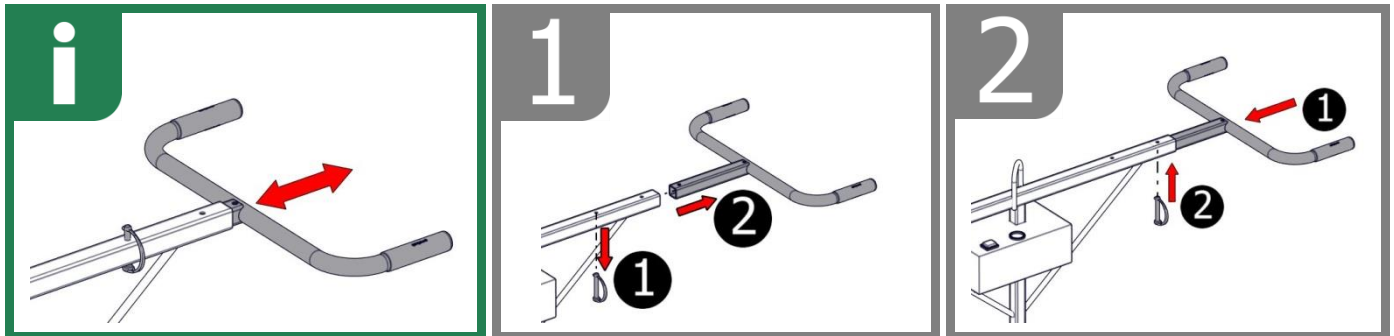


4.3 Assembly of Stop for Wheel Set VPH-RS-AS



5 Adjustments

5.1 Adjustment of VPH and the assembly



6 Operation

6.1 Operating Elements



Main switch –on / off. This is to turn the pump on and off.

Caution! The suction guide line is automatically bled when the VPH is switched off.

For a description of the other elements, please refer to the Appendix: Operating Instructions for the Battery Diaphragm Pump!

To suction and release the load:

Main Switch ON = suction load, hold

Main switch OFF = release load (remove feet from danger area beforehand!)

6.2 Suction Plate

The suction plate brings the vacuum onto the load. It is used to lift various objects.



Only use suction plates intended for the VPH.

Never exceed the permitted maximum carrying capacity of the suction plate!

6.3 General



- Do not let go off the handle of the device VPH whilst a load is being lifted.
- Never pull the load diagonally or drag it.
- Do not try to free loads which are stuck using the VPH.

- If there is a power failure, put down the load straight away if possible. Move away from the danger area immediately.



- Only suction and lift suitable loads (Check for stability and surface density).
- Always keep an eye on the pressure gauge. Never lift a load under - 0,5 bar. If the pointer in the pressure gauge moves into the red zone below - 0,5 bar, put down the load immediately.
- Set down the goods on clear, even surfaces only. Otherwise they could slip when released.
- Only release the load when it is fully and securely standing or lying down.
Keep your fingers away from the load when relevant it to **prevent them from being crushed!**
- Always load the suction plates evenly.

6.4 Battery



LED-board:

yellow = charged completely

green = normal status

red-green changing = battery low, charge

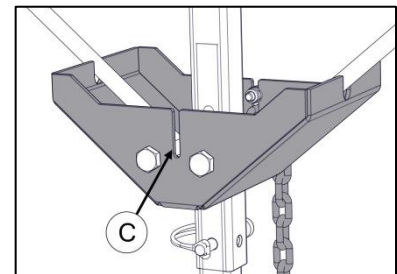
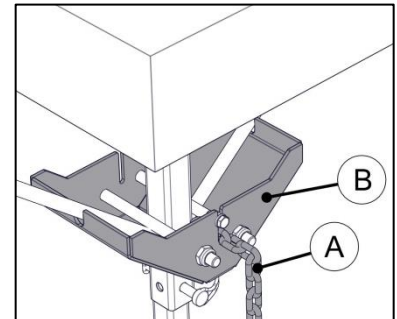
red = do not use, battery is empty

6.5 Lifting, Transport and Installation (hoist operation)



When using the device in hoist operation the safety chain has to be used in any case!

1. Position the device directly above the load. Avoid pulling it diagonally, make sure the load is evenly distributed.
2. Place the device onto the load.
3. Switch the device on using the main ON / OFF switch.
4. The load is now sucked.
5. Look at the pressure gauge. As soon as a **vacuum of -0.5 bar** is reached, you can lift the load. On no account lift it earlier, as the load would fall off. When lifting, make sure that only one part at a time is being lifted! Carefully release any bits left hanging on with a screwdriver before lifting the load any further.
Do not remove any bits with your hands, **risk of crushing!**
6. Lift the device with the sucked load a little (approx. 20 cm).
7. Put the safety chain **A** out of the chain box **B** (see III.).
8. Throw the safety chain under the lifted load.

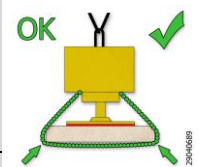


In doing so never reach your hands under the lifted load! Danger of crushing!

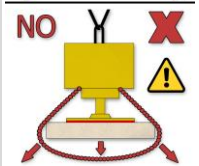
9. **Firmly** mount the safety chain on the other side of the device in the slot **C** (see III.).
10. Place the end of the safety chain in the chain box **B**.



The safety chain **has to fit tightly on the load**, to make sure, that the load will be held by the safety chain in case of **vacuum loss or vacuum failure** (e.g. caused by energy failure), (see III.).



The load-securing chain should never hang loosely under the load, otherwise the load could fall down in case of vacuum loss or vacuum failure (e.g. caused by energy failure), (see III.).



11. Now transport the device with the sucked load to the destination point.
12. Carefully lower the load (approx. 20 cm to the ground), unhook the safety chain and pull it out from under the load.



In doing so never reach your hands under the lifted load! Danger of crushing!

13. Put the load-securing chain back in the chain box.
14. Lower the load and place it on clear, even surfaces, so that the load does not slip or tip.
15. Switch off the diaphragm pump using the main ON / OFF switch.



Caution! Once the machine is switched off, the suction lead is automatically bled and so the vacuum disappears. Always keep feet well away from the danger area!

6.6 Lifting, Transport and Installation (manual operation)

1. Position the device directly above the load. Avoid pulling it diagonally, make sure the load is evenly distributed.
2. Place the device onto the load.
3. Switch the device on using the main ON / OFF switch.
4. The load is now sucked.
5. Look at the pressure gauge. As soon as a **vacuum of -0.5 bar** is reached, you can lift the load. On no account lift it earlier, as the load would fall off.
When lifting, make sure that only one part at a time is being lifted! Carefully release any bits left hanging on with a screwdriver before lifting the load any further.
Do not remove any bits with your hands, **risk of crushing!**
6. Now transport the device with the sucked load to the destination point.
7. Lower the load and place it on clear, even surfaces, so that the load does not slip or tip.
8. Switch off the diaphragm pump using the main ON / OFF switch.



Caution! Once the machine is switched off, the suction lead is automatically bled and so the vacuum disappears. Always keep feet well away from the danger area!

6.7 Tile laying



Recommended device configuration:

- VPH basic device+
- VPH-RS wheel set+
- VPH-RS-AS, height adjustable stop, to put the tile in different angle positions, tilted to the front.

Example for tile laying



Only with the height adjustable stop VPH-RS-AS loads can be sucked in eccentrically. Otherwise the load can become detached or break!

6.8 Damages of suction plate

Avoidance of damages:

To avoid damages of the rubber seal on the suction plate (chinks, abrasion) take notice, that: during the operation (lifting, transporting and lowering) with the device, the suction plate does not brush or pump against other products or materials.



Otherwise the rubber seal on the suction plate could be damaged (danger of pressure loss).
Product could fall down. **Danger of accidents!**

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.

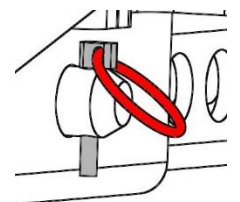
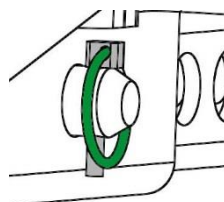


All operations may only be made in unpressurised, electro less and closed state of the device!

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)



7.2 Suction plate

- Clean the sealing lips with compressed air and/or water jet once per week to remove any objects and dirt such as sand, stone particles, dust etc. Clean slot in the sealing lip with a cloth and / or blow out with compressed air.
- (If applicable): Clean the groove in the sealing lip with a wipe and/or blow out with compressed air.
- Damaged or worn sealing lips (cracks, holes, deformation) must be replaced immediately.
- Use only cold solvent for cleaning the device. Do not use benzene or caustic liquids, since these will damage the hoses.

7.3 Fault finding

| Fault | Cause | Remedy |
|--|--|--|
| A vacuum of - 0,5 bar cannot be achieved. | The item to be lifted has splits, recesses or is porous. | The item is not suitable to be lifted with the device |
| | The foam rubber is damaged. | Replace the foam rubber. |
| | The pressure gauge is faulty. | Replace the pressure gauge. |
| | The hose or screws are leaky. | Replace the relevant parts. |
| VPH just wont work/ or no Vacuum available | Battery | Check the battery is fully charged |
| | value | Check the fuse is of the correct value (8amp) and is not blown |
| | seal | Check the seal around baseplate, if possible remove the seal and clean around the edge of the plate, and in the groove of the seal, but do not glue the seal on. |
| | vacuum pipe | Check the fitting that interfaces the vacuum pipe to the plate and check that it is fully tightened and has not come loose. |
| | air filter and the fittings | Check the air filter and the fittings such as pipe clips etc, and make sure they are tightly sealed. |
| | ON / OFF switch | Make absolutely sure that the ON / OFF switch is working ok. |
| | wires on solinoid valve | Check the wires on the solinoid valve are connected ok. |
| | short circuit on solinoid | Check the diode on the solinoid (1N4001 etc) has not gone short circuit, you can remove this completely or just cut it out, Do not replace this component |
| | pipes to the vacuum pumps | Check all pipes to the vacuum pumps are not damaged. |
| | foreign bodies | Check that there is a vacuum or pressure on the pumps and that they have not been damaged by the ingress of foreign bodies. |

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/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:

7.7 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)!

8 Vacuum pump

8.1 General

This vacuum pump is equipped with a rechargeable 12 Volt 6.5 Ah lead battery, and the pump is powered by an in-built lead battery.

The recharging control system lets you see how charged up the battery is.

8.2 Safety Advice

- The voltage must comply with that stated on the vacuum pump data plate. The pump must only be powered by a 12 Volt direct current.
 - Before working on the pump, including changing the supply hose, remove the plug from the socket.
 - The lead wires have to be in perfect condition. Any damaged parts have to be replaced immediately.
 - Only use original spare parts.
 - **Do not plug in the pump to the mains if it is raining or damp.**
 - When opening covers or removing parts, except for when this can be done by hand, live parts can be exposed. Connections can also be live.
 - Before carrying out any maintenance work, repairs or replacing any parts, the pump must be disconnected from all power sources if it needs to be opened.
-
- Do not use the pump in rooms or in surroundings in which gases, fumes or dust are present or could be present.
 - **Protect the device for wetness and dampness.**

Do not use the pump if safe working conditions cannot be guaranteed. It would not be safe to continue if:

- The pump is clearly damaged.
- The pump no longer works.
- It has been stopped for a long period or in unfavourable conditions.
- It is damaged during transportation.

Never switch the pump on straight away if it is brought in from a cold room to a warm one. The condensation could damage your pump. Let it come to room temperature without switching it on.

8.3 Description

The pump consist of the following parts:

- Robust aluminium casing with a mounting to fix it onto the Probst stand.
- Two 12 Volt diaphragm pumps.
- Main switch – on / off function – using the main switch you can switch the pump on or off. By switching it off, the suction lead is automatically ventilated.
- Fuse holder with fine wire fuse.
- The Vacuum pump is fitted with a charging control system. 3 LEDs show you how charged the battery is.

- Yellow LED above 14,5 Volt → Voltage- Battery is overcharged
- Green LED 11,5 – 14,5 Volt → Voltage- Normal
- Red LED under 11,5 Volt Voltage → Battery needs charging

On the underpart of the pump you will find a socket. You can charge up the battery in this socket without having it dismantled.

On the underpart of the pump you will also find a connection for the suction hose. When the suction hose and the filter are inserted, the other end of the hose is attached to the suction plate.

On the filter element there is an arrow which indicates the air current. Please make sure that the air current is pointing towards the vacuum pump.

8.3.1 Charge battery

To ensure the perfect working of the pump, it is important that the lead rechargeable battery is always charged up.

To charge the battery:

Proceed as follows:

- Set the main switch to 0.
- Remove the lead hoses (suction hose)
- Insert the battery charger on the underside into the in-built socket.
- Plug the battery charger into the 220 Volt mains.

Once the battery has been successfully charged, disconnect the battery charger.

Put the connection hoses in and switch on the pump at the main switch.

(if everything is okay, the green LED will light up on the charging control panel).

As soon as the in-built battery falls under 11,5 Volt, the red LED will light up. The battery will then need recharging.

When you have finished, switch off the machine and remove the hoses (in compliance with all regulations).

8.4 Maintenance

The pump is basically maintenance-free.

All necessary spare parts are available for the vacuum pump.

Repairs should be only carried out by authorized experts.

Disconnect from the mains before starting any repairs.

The diaphragms are the parts which will wear out first. When replacing the diaphragms, the valves and the seals should also be replaced.

As and when required, it would pay to use suitable filters in order to improve the life of the pump considerably.

MAKE SURE THAT THE BATTERY IS NEVER TOTALLY FLAT.

REMEMBER THAT WHEN THE MACHINE IS NOT IN USE, THE BATTERY WILL STILL BE GOING FLAT.

MAKE SURE THAT NO LIQUIDS OR SOLIDS GET INTO THE PUMP.

8.5 Technical Data**Pump / Solenoid Valve**

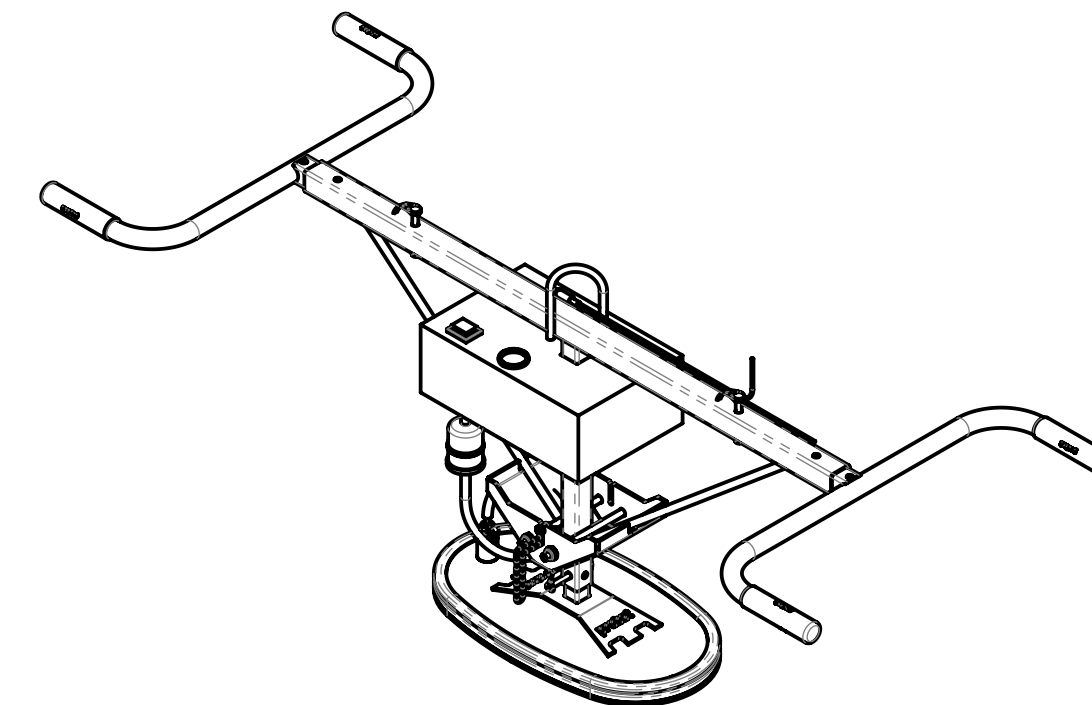
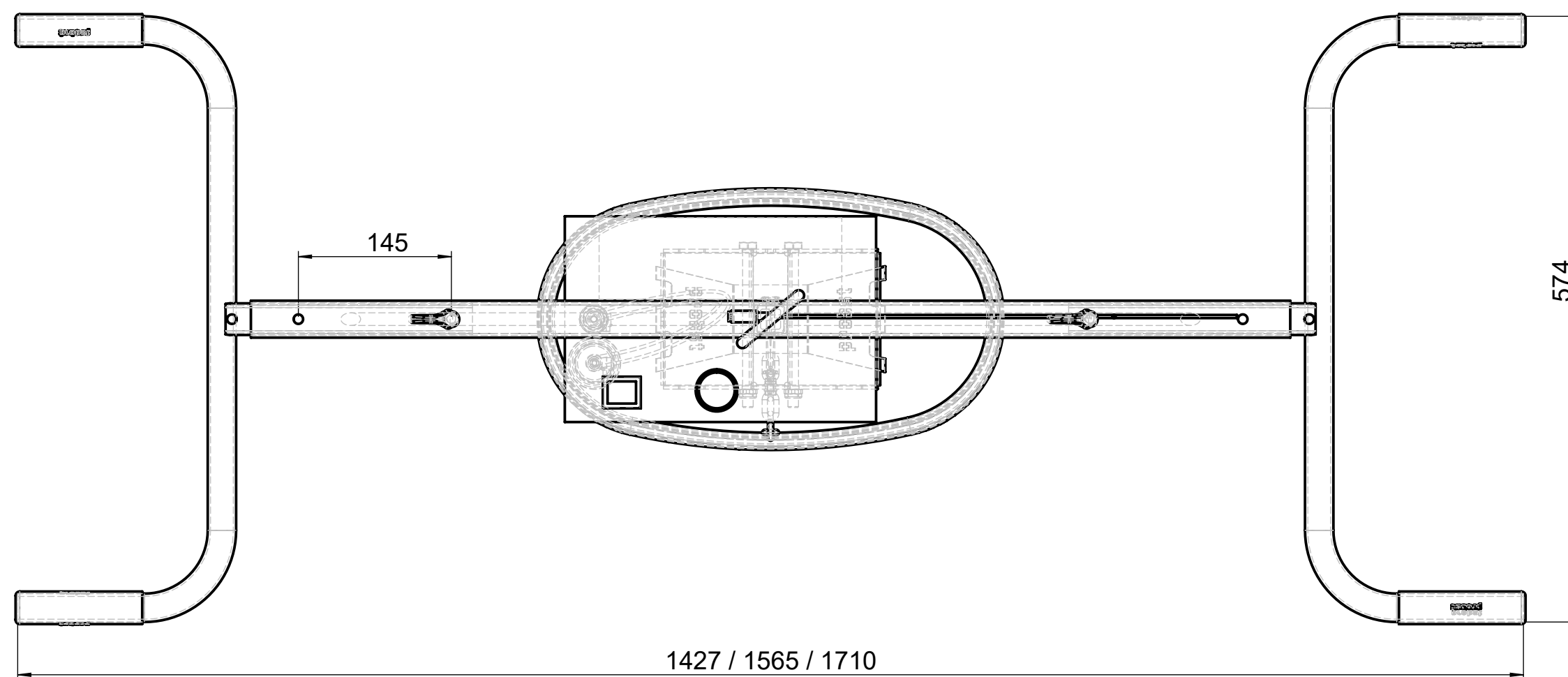
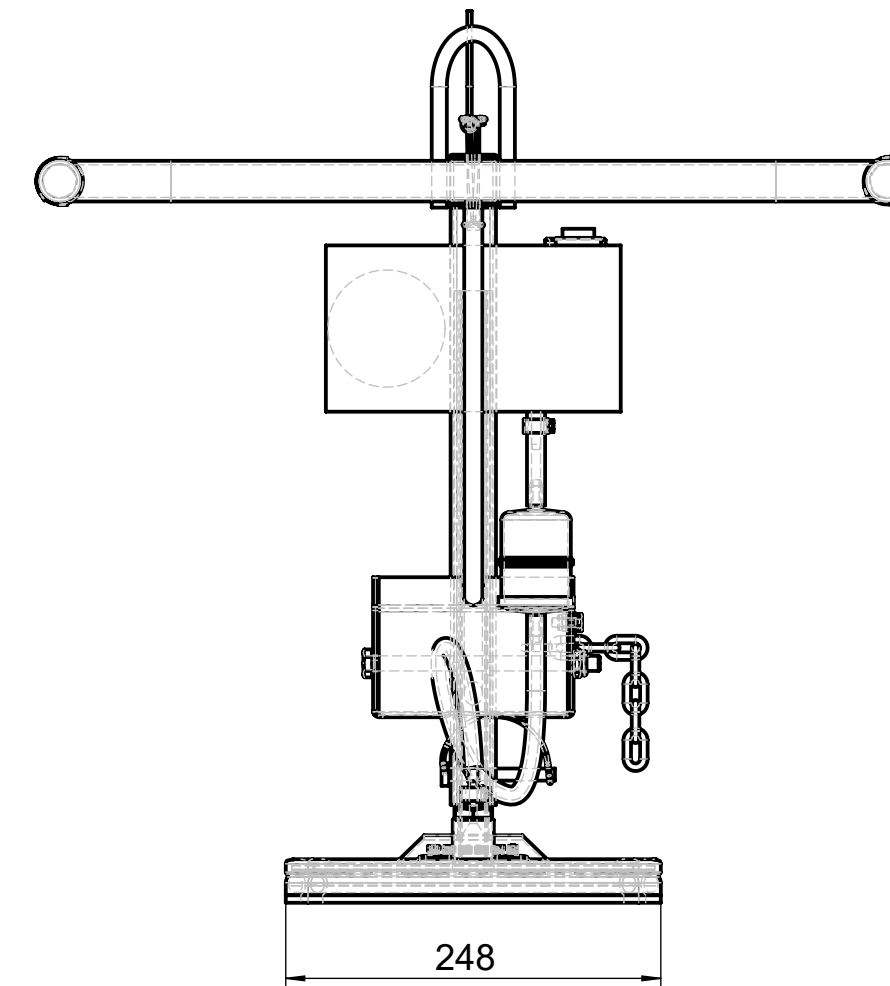
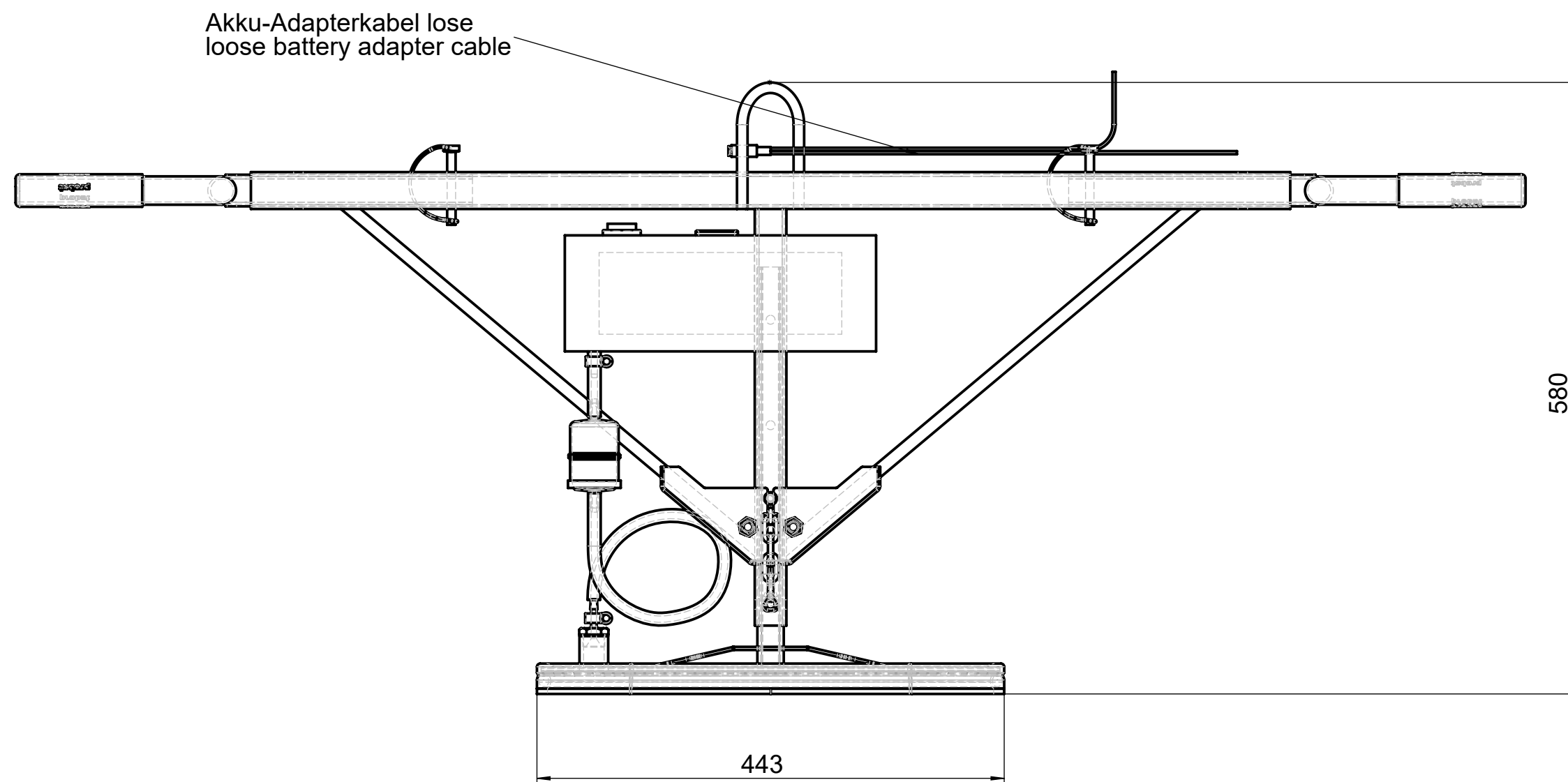
| | |
|------------------------|-----------------------|
| Type of Pump | 7012 V (2) |
| Line Voltage | 12 Volt DC |
| Power Inut | 1.4 A |
| Conveying Caacity | 18 NL/min. |
| Final Vacuum Minimum | 70 % |
| 2/2 Way Solenoid Valve | 12V 6,5 Watt Solenoid |

Part / Device

| | |
|-----------------------|----------------------------------|
| Diaphragm | NBR Perbunan |
| Valves | Neopren |
| Pump Casing | Glass-fibre reinforced polyamide |
| Solenoid Valve Casing | Brass |
| Hoses (internal) | Silicone |
| Hoses (external) | PVC fabric hose |

Lead Battery

| | |
|----------------------------------|---|
| Type | 12V6,5Ah |
| Charging Voltage Float in V/Cell | 2.3-2.35 |
| Charging Load Cycles in V/Cell | 2.4-2.45 |
| Transport | decree road GGVS – no. decree railway GGVE – no. |



Tragfähigkeit / Working Load Limit WLL:
150 kg / 330 lbs

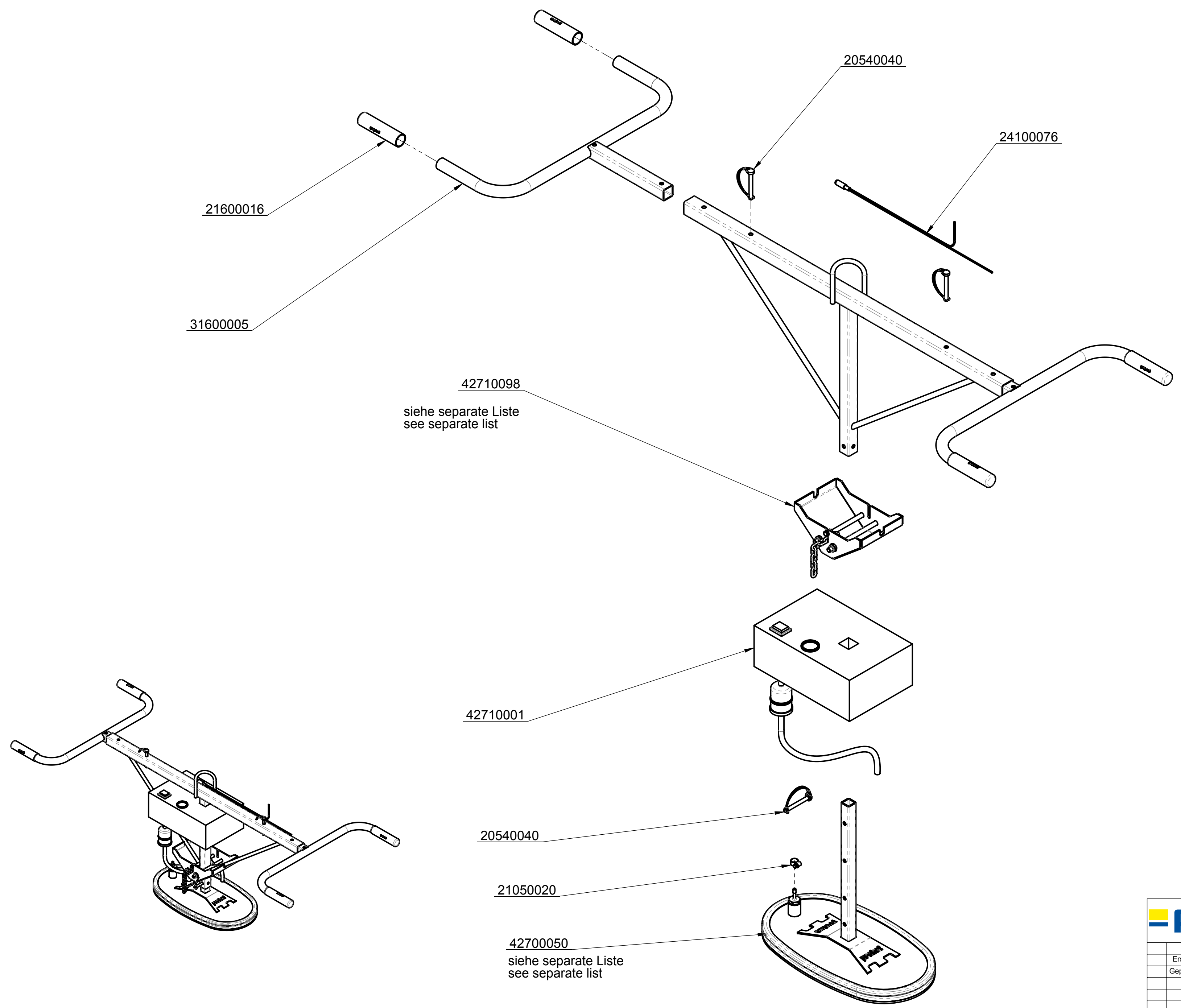
Eigengewicht / Dead Weight:
19,7 kg / 43,5 lbs

Product Name:
VACUUM-POWER-HANDY VPH-150



© all rights reserved conform to ISO 16016

| | | | | |
|-------|-----------------|----------|--------------------------------|-------|
| | Datum | Name | Benennung | |
| | Erst. 26.4.2018 | M.Wunder | Vakuum-Power-Handy VPH 150 | |
| | Gepr. 26.4.2018 | M.Wunder | 2-Mann-Bedienung | |
| | | | Artikelnummer/Zeichnungsnummer | Blatt |
| | | | D52710008 | 1 |
| | | | | von 1 |
| Zust. | Urspr. | Ers. f. | Ers. d. | |

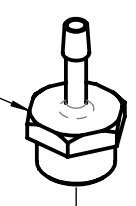


| | | | |
|------------------------------------|--------|--|---------|
| | | © all rights reserved conform to ISO 16016 | |
| | | Benennung | |
| Erst. 26.4.2018 Gepr. 26.4.2018 | | M.Wunder M.Wunder | |
| | | Vakuum-Power-Handy VPH 150 | |
| | | 2-Mann-Bedienung | |
| | | Artikelnummer/Zeichnungsnummer | |
| | | E52710008 | |
| | | Blatt 1 von 1 | |
| Zust. | Urspr. | Ers. f. | Ers. d. |

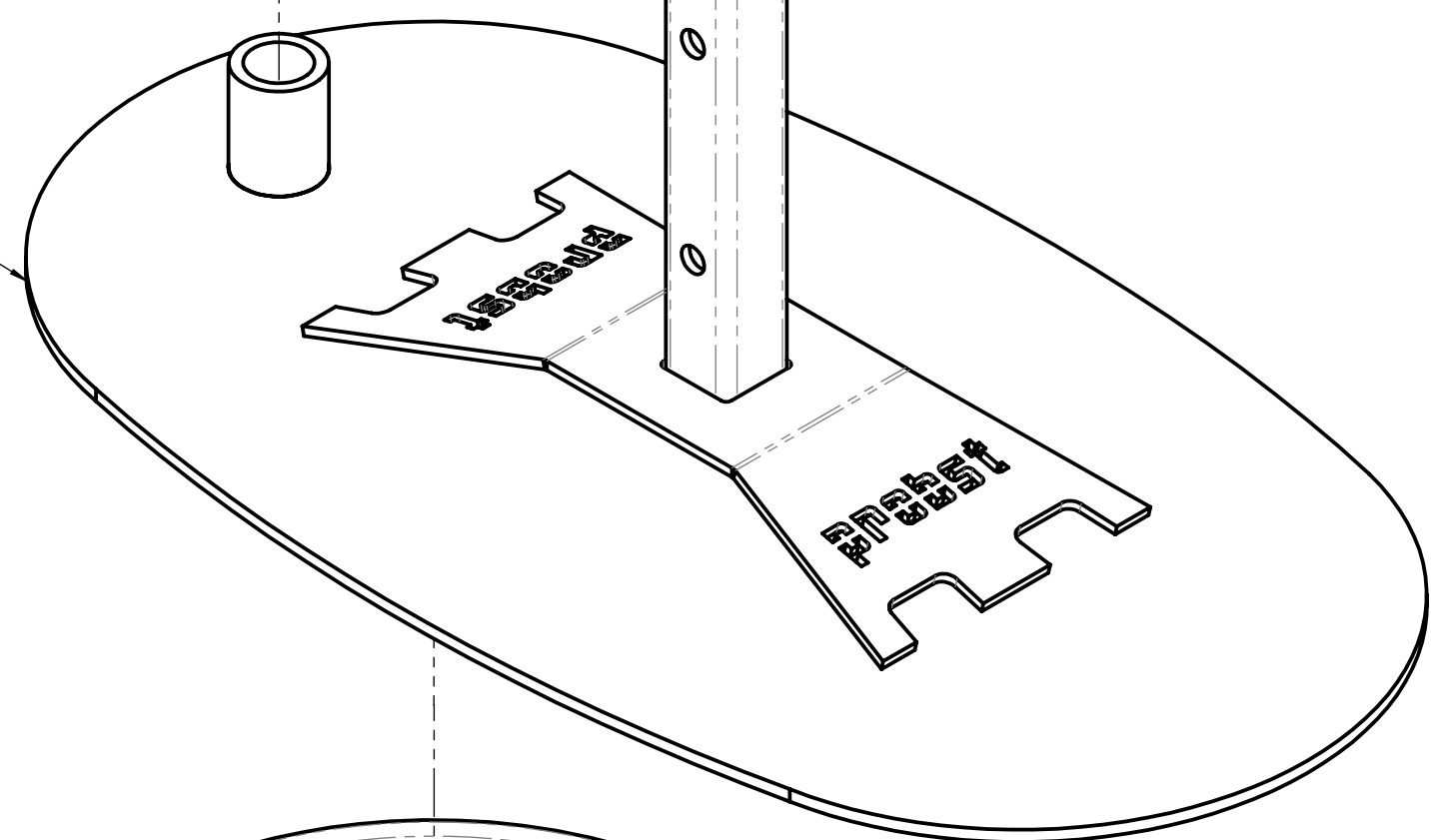
8 7 6 5 4 3 2 1

F
E
D
C
B
A

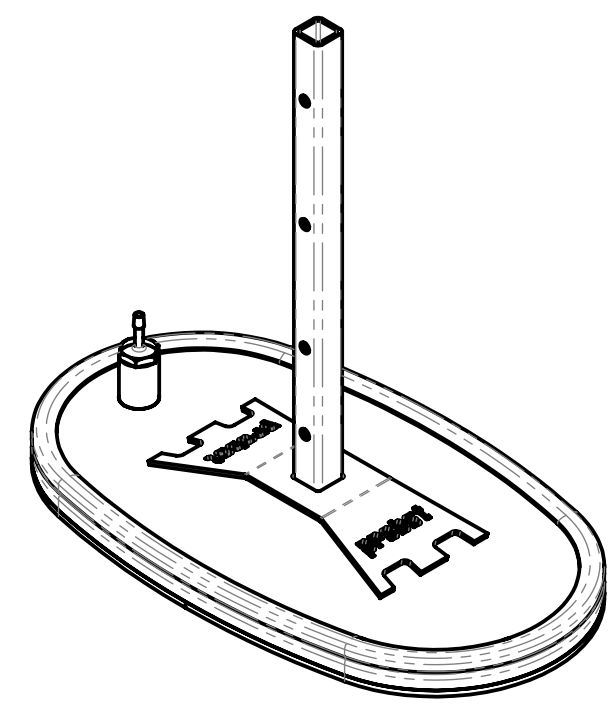
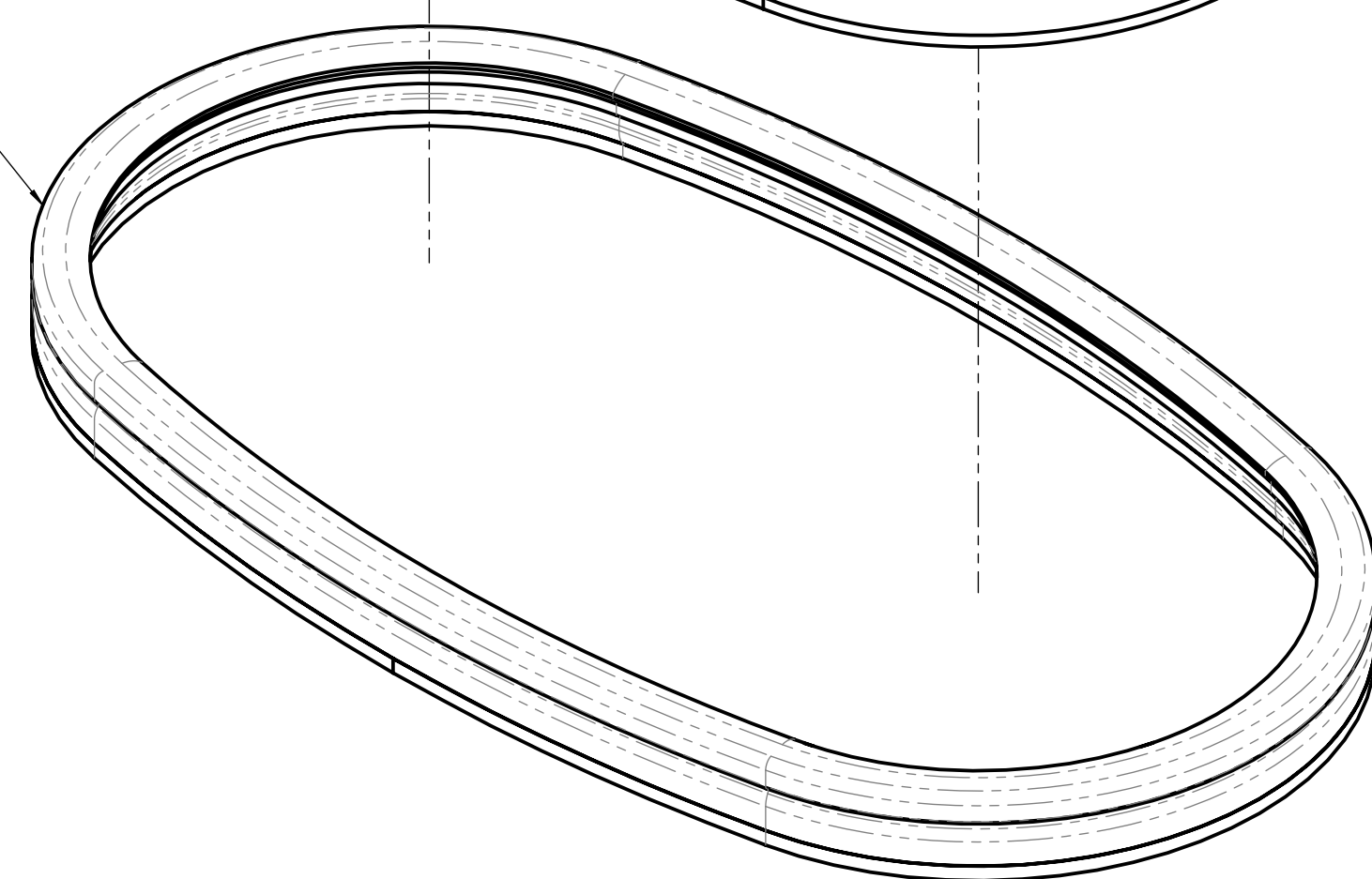
25290008



42700070



42730012



© all rights reserved conform to ISO 16016

| | Datum | Name | Benennung |
|--------------------------------|-----------|----------|---|
| Erst. | 15.7.2015 | M.Wunder | Saugplatte SPSHP 150-44/25 VPH mit HP-Dichtung |
| Gepr. | 15.7.2015 | M.Wunder | |
| Artikelnummer/Zeichnungsnummer | | | Blatt |
| E42700050 | | | 1 |
| | | | von 1 |
| Zust. | Urspr. | Ers. f. | Ers. d. |

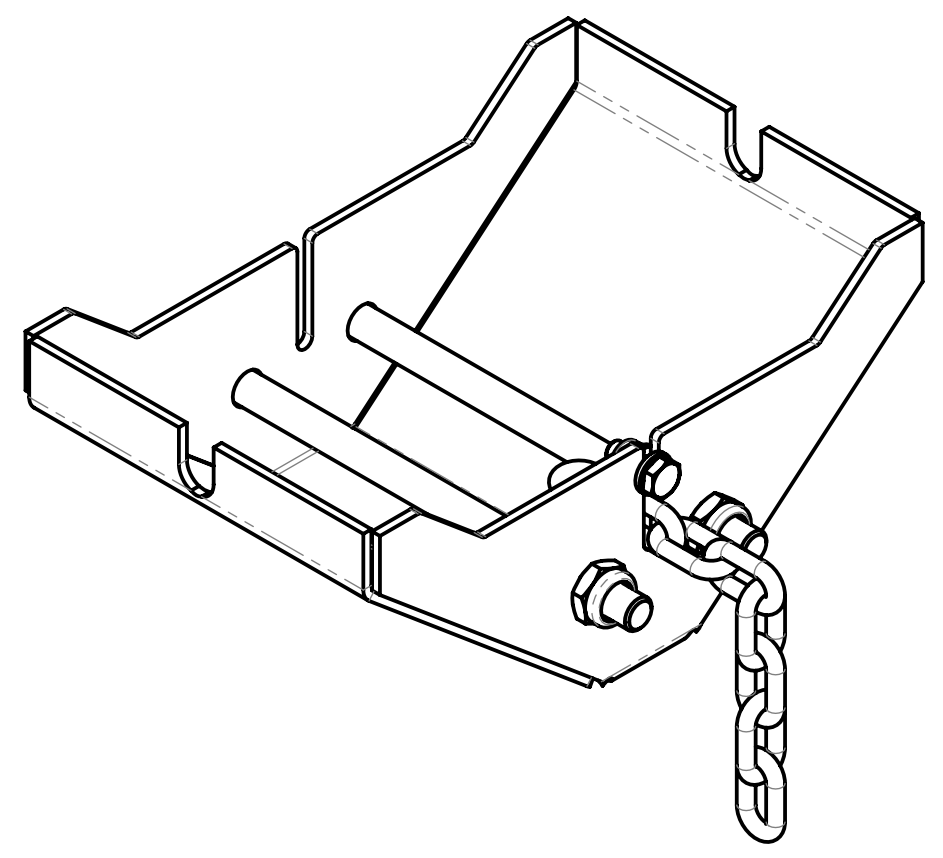
8 7 6 5 4

20000248 20000248

20100014

33503991

21000261




33503990

20100016

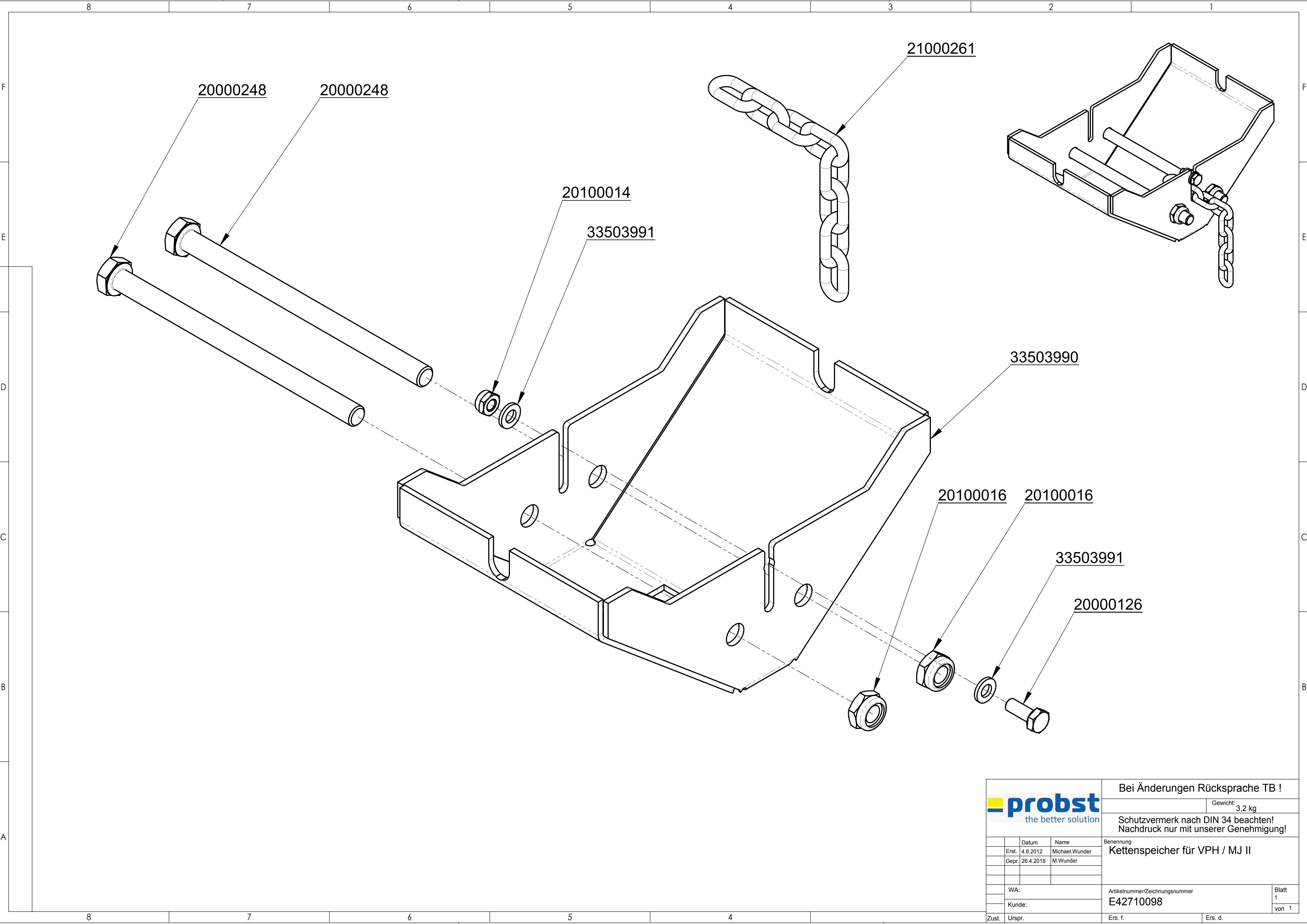
20100016

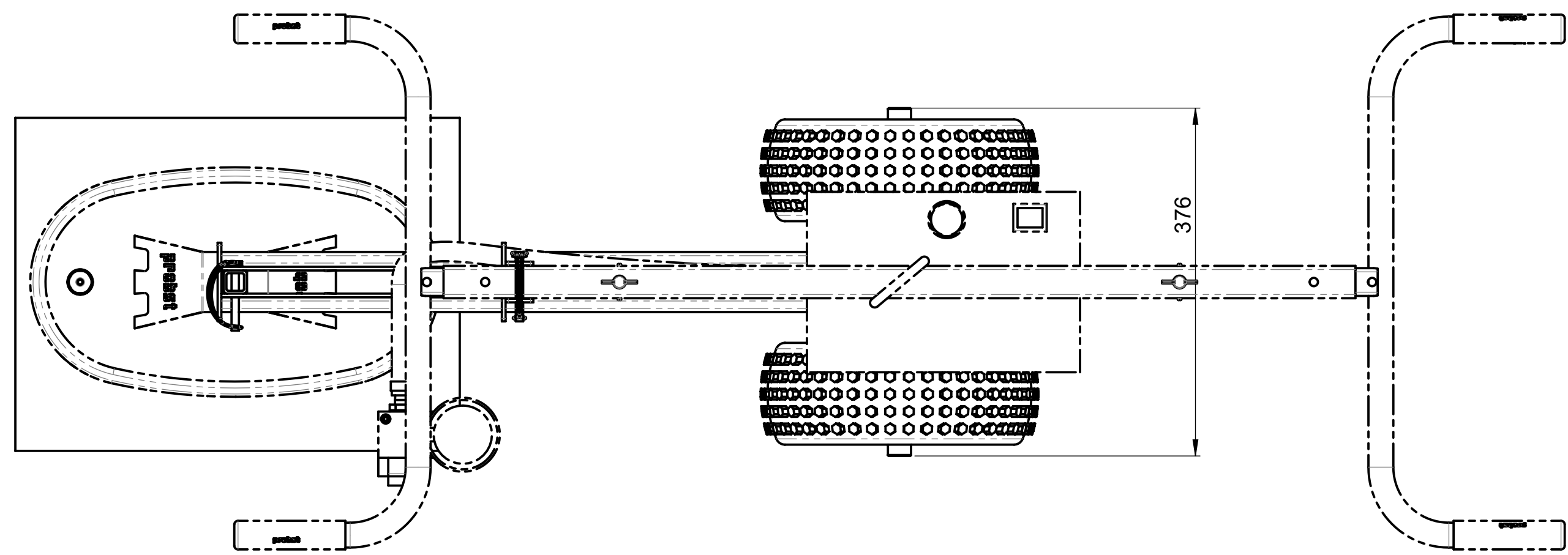
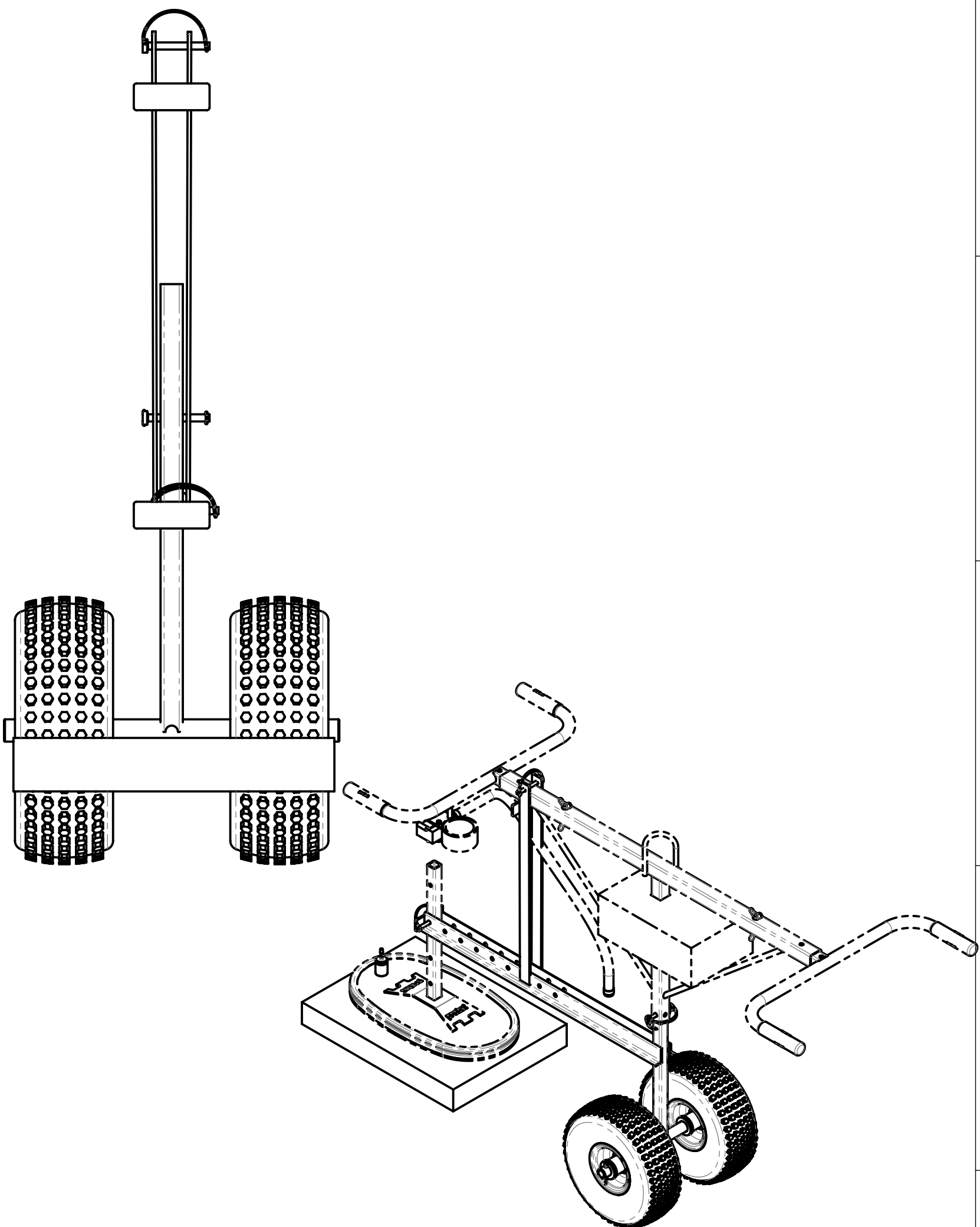
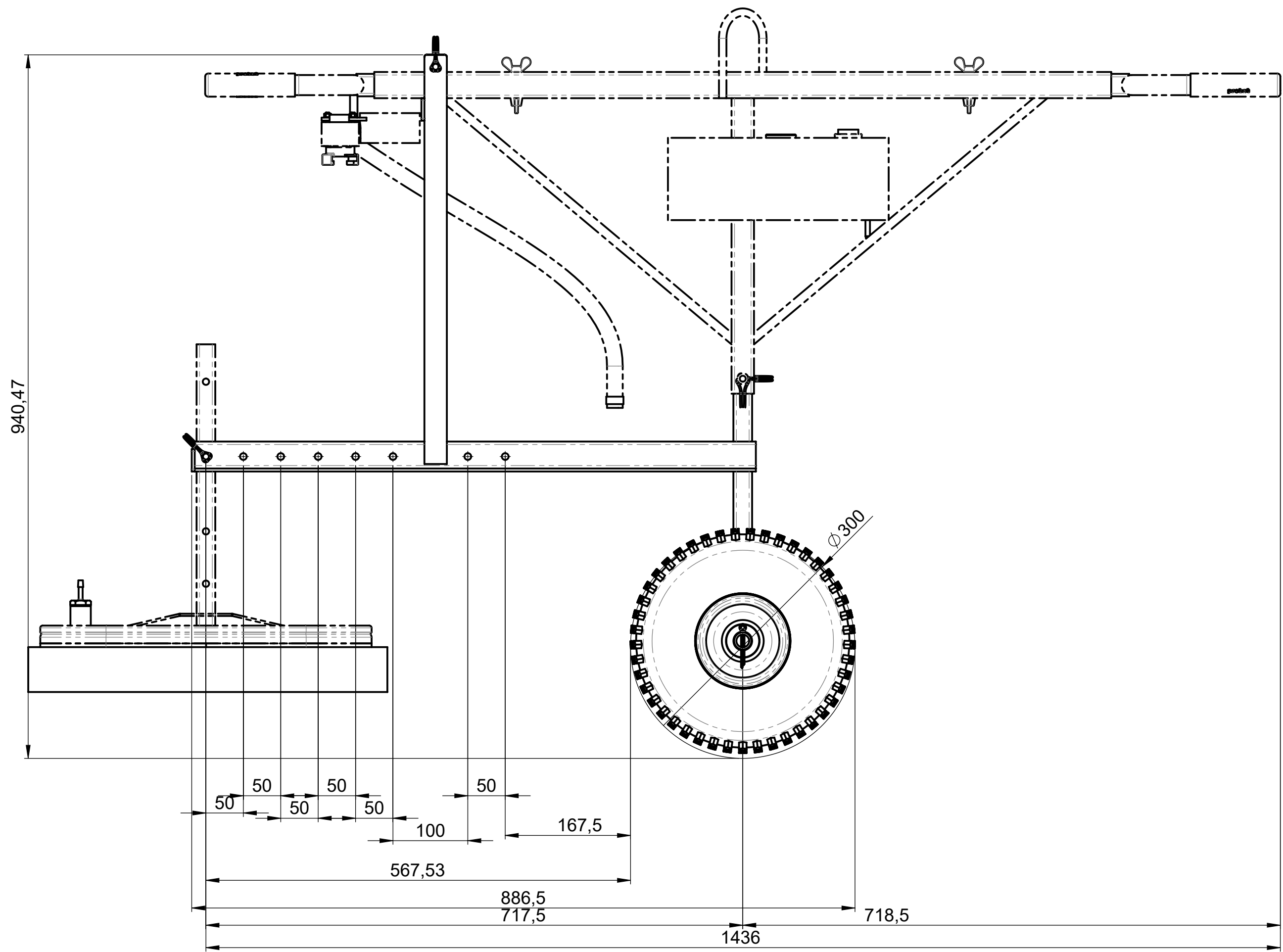
33503991

20000126

| | |
|---|--------|
|  | |
| the better solution | |
| WA: _____ | |
| Kunde: _____ | |
| Zust. | Urspr. |

| | |
|---|-------|
| Bei Änderungen Rücksprache TB ! | |
| Gewicht: 3,2 kg | |
| Schutzvermerk nach DIN 34 beachten! Nachdruck nur mit unserer Genehmigung! | |
| Benennung | |
| Kettenspeicher für VPH / MJ II | |
| Artikelnummer/Zeichnungsnummer | |
| E42710098 | |
| Ers. f. | |
| Ers. d. | |
| Blatt | von 1 |
| 1 | 1 |





Tragfähigkeit / Working Load Limit WLL:
150 kg / 330 lbs

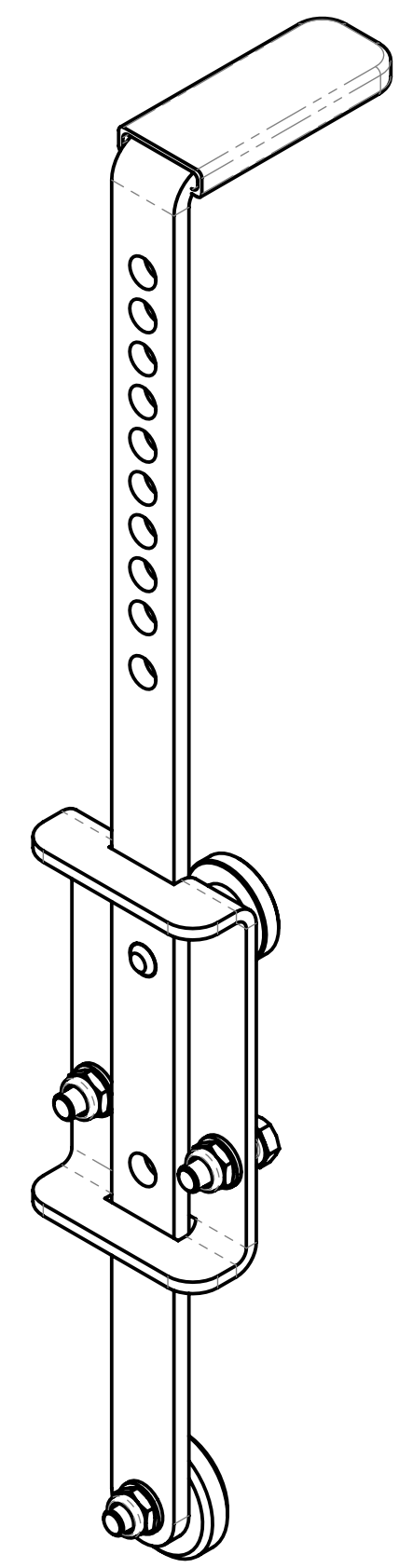
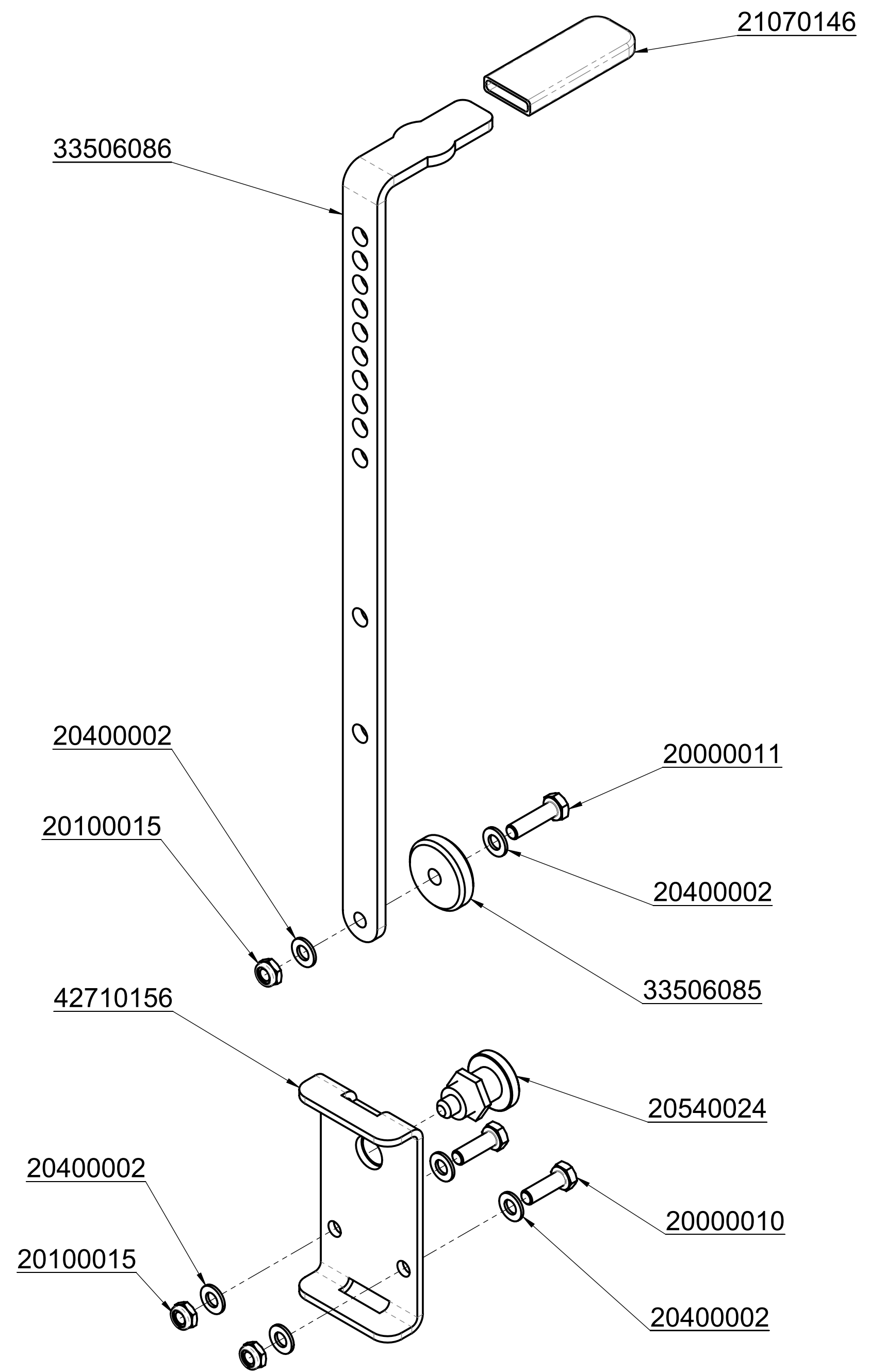
Eigengewicht / Dead Weight:
7,6 kg / 17 lbs

Product Name:
Wheel Set VPH-RS

probst handling equipment © all rights reserved conform to ISO 16016

| Datum | Name | Benennung |
|--------------------------------|----------------|---------------------------------------|
| Erst. 15.11.2013 | Michael.Wunder | VPH-Mobil, Radsatz für VPH, TK 150 kg |
| Gepr. 21.5.2015 | M.Wunder | |
| Artikelnummer/Zeichnungsnummer | | Blatt |
| D42710072 | | 1 |
| | | von 1 |

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



| | | | |
|-------|-----------|--|---------------------------------------|
| | | © all rights reserved conform to ISO 16016 | |
| | Datum | Name | Benennung |
| Erst. | 16.5.2018 | M.Wunder | Anschlag für Radsatz VPH VPH-RS-AS |
| Gepr. | 17.5.2018 | M.Wunder | |
| | | | Artikelnummer/Zeichnungsnummer |
| | | | E42710154 |
| Zust. | Urspr. | Ers. f. | Ers. d. |
| | | | |
| | | | Blatt 1 von 1 |

AS52710008 VPH-150 AS52710009 VPH-100

Für Kunde und Service, A-Zng für Montage siehe A52710008

| | |
|-------------------------------------|-----------------------|
| probst handling equipment | XXXXXXXX |
| Artikel-Nr. 53100130 | |
| Geräte-Nr. 31516003-10-001 | |
| Baujahr 2015 | |
| Eigengewicht 18 kg | |
| Tragfähigkeit (VLL) 250 kg | |
| Greifbereich 50 - 540 mm | |
| Eintauchtiefe 130 mm | |
| 0 123456 789012 | CE Made in Germany |

probst VPH
handling equipment

150 kg
2904.0207

VPH-150 | 52710008:
29040207

100 kg
29040575

VPH-100 | 52710009:
29040575

29040221
Auf beiden Seiten / on both sides

29040744

29040209

29040690
Auf beiden Seiten /
On both sides

29040056

29040665

29040129
Auf beiden Seiten / on both sides

