



Operating Instructions

Translation of original operating instructions

Manhole and cone chain clamp SRG

SRG-1,5/SRG-3/SRG-3-L



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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Signature, information to the subscriber:

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

2 General

2.1 Authorized use



- The device is only designed for the use specified in this documentation.
- Every other use is not authorized and is forbidden!
- All relevant safety regulations, corresponding legal regulations, especially regulations of the declaration of conformity, and additional local health and safety regulations have to be observed.



Prior to every operation the user must ensure that:

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

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



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

- The SRG is specially designed for the safe transport of manholes and conical manholes. Any other use of the SRG is unauthorized and therefore forbidden.
 - All relevant safety regulations, and additional local health and safety regulations have to be observed.
 - The SRG must be only be used in close proximity to the ground.
- The following is **prohibited**. There is a danger of the load being released:
- **Do not exceed** the safe working load.
 - No personnel are allowed to remain under the load or within the danger area: **life threatening!**
 - **Do not transport** manholes/cones whose specifications do not correspond with the model of the pipe suspension grab (e.g. wall thickness, manhole diameter, type of socket end) or do not transport any other elements.
 - **Do not use** the equipment to transport people: **life threatening!**
 - **Do not use** the equipment to transport animals.
 - Always lift load vertically. It is unsafe to lift at an angle.
 - **Do not allow** loads to break free, be pulled or dragged.
 - **Do not allow** sudden movements and swaying of the load.
 - **Do not allow** unequal loading of the jaws.
 - Always lift jaws vertically. It is unsafe to lift at an angle.
 - **Ensure that only fully finished, set and dry (never icy) manholes/cones are transported**



NOT ALLOWED ACTIVITIES:

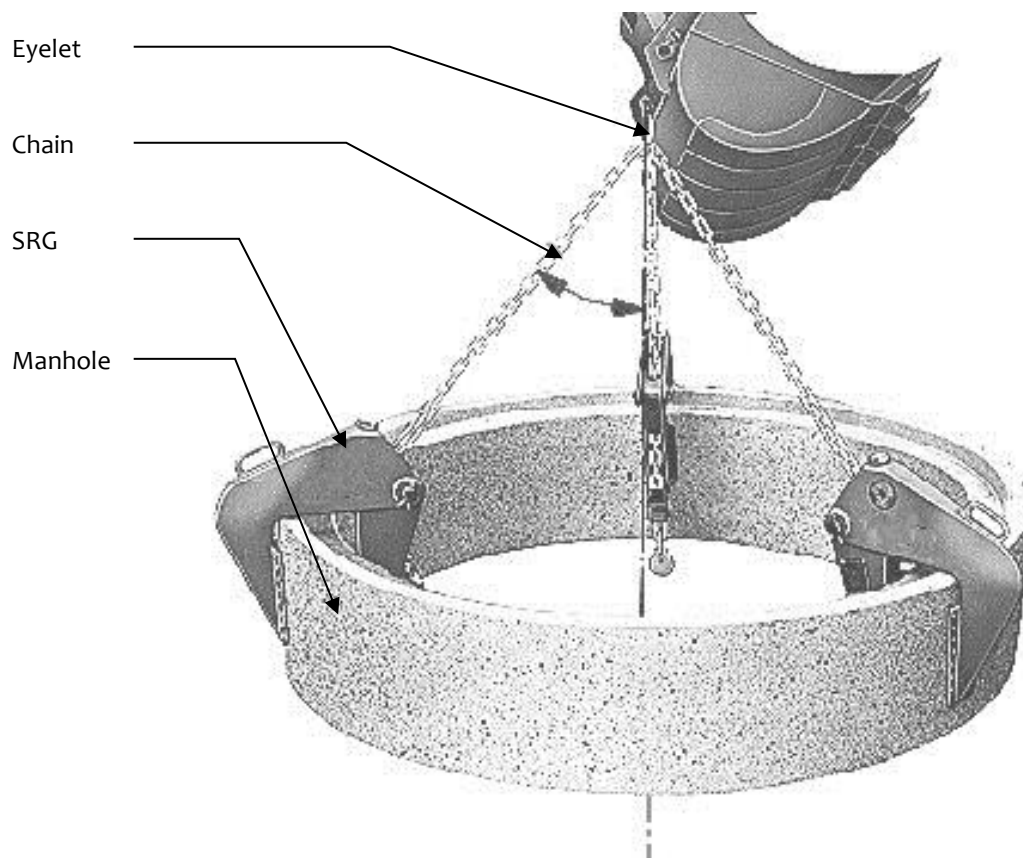
Unauthorized alterations of the device and the use of any self-made additional equipment could cause danger and are therefore **forbidden!!**

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.

2.2 Survey and construction



2.3 Technical data

Order-No.:	Typ	Carrying capacity	Gripping Range of Claws	Nominal Value ID of cones and manholes
5440.0001	SRG-1,5	1,500 kg (3,300 lbs)	40-120 mm (1½ – 4¾")	400-2,000 mm (15¾ – 79")
5440.0002	SRG-3	3,000 kg (6,600 lbs)	50-180 mm (2 – 7")	400-2,000 mm (15¾ – 79")
5440.0003	SRG-3-L	3,000 kg (6,600 lbs)	50-180 mm (2 – 7")	400-3,000 mm (15¾ – 118")

3 Safety

3.1 Safety symbols



Danger to life!

Identifies imminent hazard. If you do not avoid the hazard, death or severe injury will result.



Hazardous situation!

Identifies a potentially hazardous situation. If you do not avoid the situation, injury or damage to property can result.



Prohibition!

Identifies imminent a prohibition. If you do not avoid the prohibition, death and severe injury, or damage to property will result.

3.2 Explanation of basic concepts

Gripping range:	<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.
Load capacity:	<ul style="list-style-type: none"> specify the maximum possible load of the device (lifting of gripping goods).

3.3 Definition skilled worker / specialist


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

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


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

3.4 Safety Marking


PROHIBITION SIGN

Symbol	Meaning	Order-No.:	Size:
	It is not allowed to be under hanging loads. Danger to life!	2904.0210	30 mm
		2904.0209	50 mm
		2904.0204	80 mm

WARNING SIGN

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

REGULATORY SIGN

Symbol	Meaning	Order-No.:	Size:
	Read operating instructions before operating.	2904.0366	30x57 mm
		2904.0365	50x95 mm

3.5 Personal safety requirements



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

3.1 Protective equipment

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

- Protective clothing
- Safety gloves
- Safety shoes

3.2 Accident prevention



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



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



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

3.3 Function Control

3.3.1 General



- Before using the device check the functions and the working condition.
- Maintenance and lubrication are only permitted when device is shut down!



- Do not use the device, until all faults which can cause safety hazards are removed.
- If there are any cracks, splits or damaged parts on any parts of the device, **immediately** stop using it.



- The operating instructions must be available at the workplace every time.
- Do not remove the type plate of the machine.
- Unrecognisable information signs (such as regulatory or prohibition signs) must be replaced.

3.4 Safety procedures

3.4.1 General



- The use of the device is only permitted in proximity to the ground. Do not swing it over 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 (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)!
- **Never exceed the carrying capacity and the nominal width of the device.**
- **Never** pull or drag loads sideways. Otherwise parts of the device could be damaged.

3.5 Hydraulic excavator and other carrier



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



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

4 Installation

4.1 Mechanical connection

4.2 Load hook and chains



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



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

5 AdjustmentsAdjustments

5.1.1 Adjustment to suit the Pipe Outside Diameter

- When leaving the factory the chains are adjusted to the maximum length. If the chains are too long (in case of a lower construction height) release bolts .
- Adjust all chains to the same length and secure chains . The inclination angle must not exceed 45° : **Danger of releasing the load !**

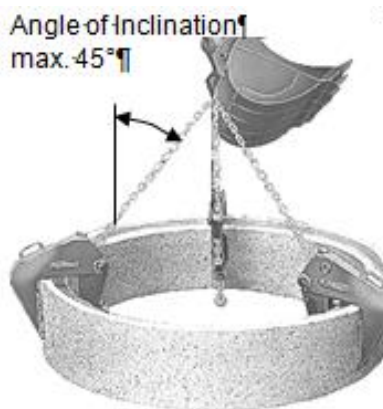


Fig. 1

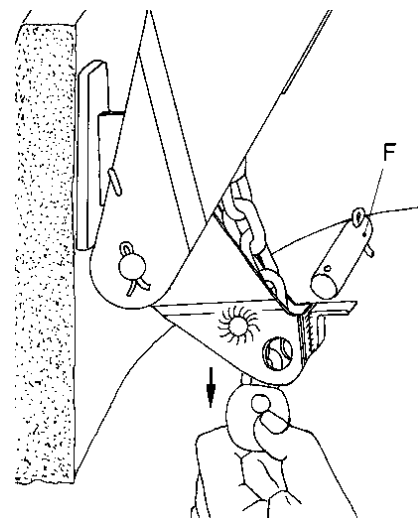


Fig. 2

5.2 Adjustment of the opening width

Open jaw by turning the adjusting screw. Do not exceed the maximum opening width as the nut of the adjusting screw is not secured. Safety hazard ! Place jaws - angle lever facing inwards - onto the manhole . Now push downwards angle lever against the spring resistance to the limit stop . Turn adjusting screw that the **opening width exceeds the wall thickness for 5-10 mm**. The opening width of all jaws must be adjusted to the same width.

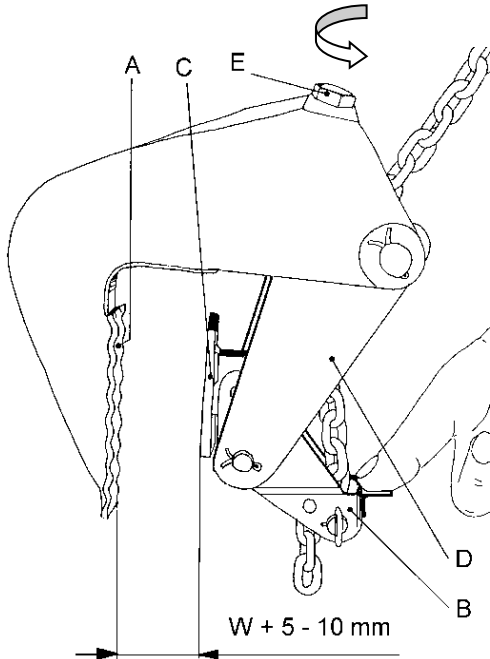


Fig. 3

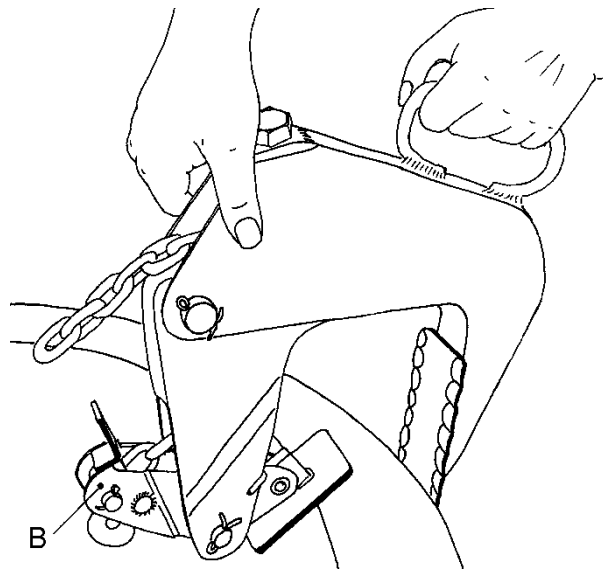


Fig. 4

6 Operation

- The manholes must be of sufficient construction to withstand clamping force during transport.
- Only transport sufficiently cemented and fracture-free manholes / conical manholes, otherwise there is a danger of the load, or part of it falling !
- Do not transport wet, flat, dirty or even icy manholes / conical manholes.
- In the case of coated manholes use the rubber-coated Pipe Suspension Grab, otherwise the coefficient of friction is too low: Danger !
- There are numerous different models of manholes on the market. Make sure that you are using the right model of Pipe Suspension Grab. (Models SVZ 1.5 and SVZ 3 may not be used for manholes acc. to DIN 4034 P 1)
- Following the adjustment to suit the outside diameter of the manhole and the wall thickness according to Paragraph before - the first manhole can be lifted:
- Position jaws equally onto the manhole (articulated lever must be pulled inwards so that all chains are equally loaded). The suspension ring must be positioned above the centre of gravity.
- Ensure that the chains are not twisted and may be easily pulled through the jaws.
- Adjust the opening width of all jaws as tight as possible.
- Now slowly lift the manhole 10 cm: the angle lever must not swivel towards the limit stop . If this happens the opening width must be adjusted more precisely . If this procedure is not followed there is a danger of the load falling !
- After controlling the tight and safe fit of the jaws onto the manhole, the manhole may be transported just above the ground. If this procedure is not followed: safety hazard !
- Always lift jaws vertically as opposed to lifting at an angle . Distortion and danger of falling !
- After setting down the manholes and the releasing of the chains, lift off the jaws .

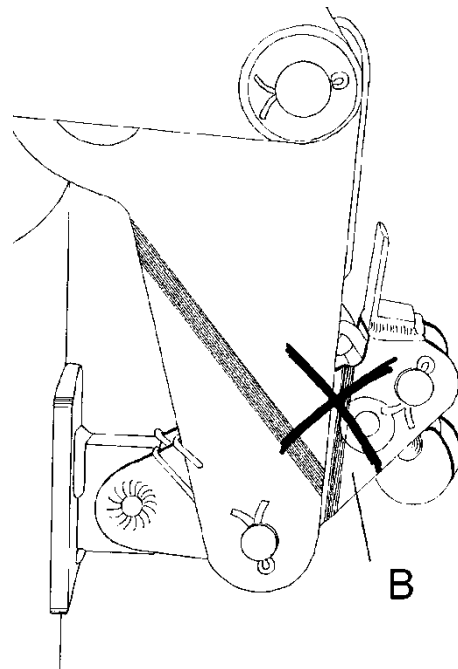


Fig. 5

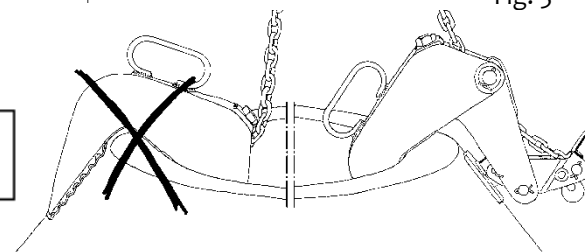


Fig. 6

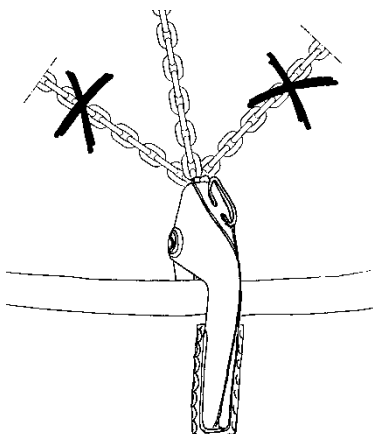


Fig. 7

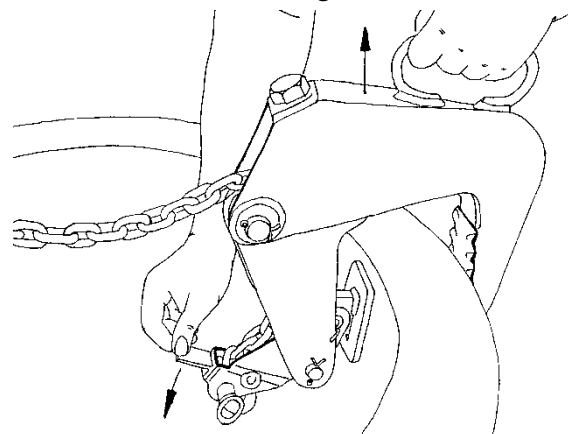


Fig. 8

Danger! Do not sway the load during transport: danger of releasing the load!

Transport of cones

- To transport symmetrically conical manholes turn all jaws about an angle of 180° to prevent the chain running over the top edge.
- As far as asymmetrically conical manholes are concerned turn only one jaw about an angle of 180° and adjust its chain to a shorter length so that all chains are equally loaded and that the conical manhole hangs in horizontal position .



Fig.9

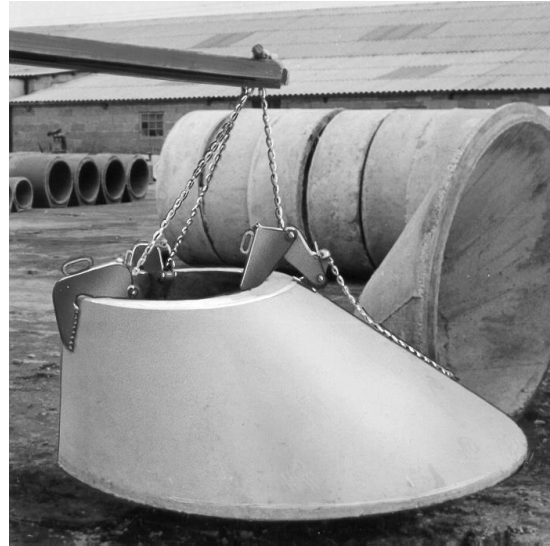


Fig.10

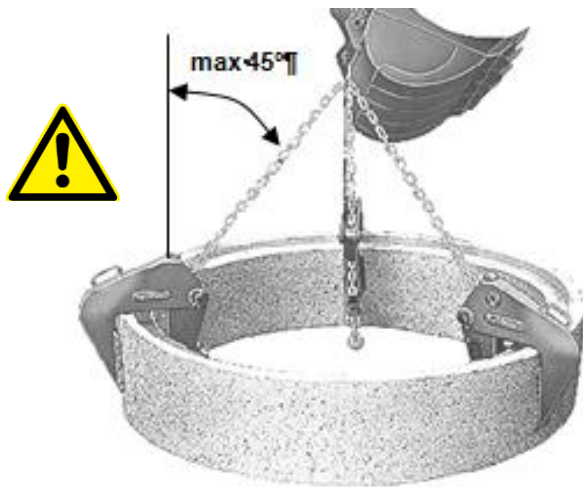


Fig. 11

7 Maintenance and care

7.1 Maintenance



To ensure the correct function, safety and service life of the device the following points must be executed in the maintenance interval.

Used **only original spare parts**, otherwise the warranty expires.



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

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

7.2 MECHANICAL

SERVICE INTERVAL	Maintenance work
First inspection after 25 operating hours	<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. 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.

7.3 Trouble shooting

ERROR	CAUSE	REPAIR
The clamping-power is not big enough, the load is slipping out		
(optional)	<ul style="list-style-type: none"> The grippers are worn 	<ul style="list-style-type: none"> Replace the grippers
(optional)	<ul style="list-style-type: none"> The maximum load is exceed 	<ul style="list-style-type: none"> Reduce the weight of. the load
(Adjustment of the gripping range) (optional)	<ul style="list-style-type: none"> The actual opening width is not correct 	<ul style="list-style-type: none"> Adjust the gripping range according to the load you want to transport
(Property of material)	<ul style="list-style-type: none"> The surface of the material is dirty or the material is not suitable / allowed for this device. 	<ul style="list-style-type: none"> Check the surface of the material or ask the manufacturer, if you the material is allowed for this device.
Unbalanced load		
	<ul style="list-style-type: none"> The device is not loaded symmetrically 	<ul style="list-style-type: none"> Adjust the position of the load
(Adjustment of the gripping range) (optional)	<ul style="list-style-type: none"> The adjustment of the gripping range is not symmetrical. 	<ul style="list-style-type: none"> Correct the adjustment of the gripping range

7.4 Repairs

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

7.5 Safety procedures

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



The check by an expert must be proved!

Device	Year	Date	Expert	Company

7.1 Hints to the type plate



Type, serial-number and production year are very important for the identification of your device. If you need information to spare-parts, warranty or other specific details please refer to this information.

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

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

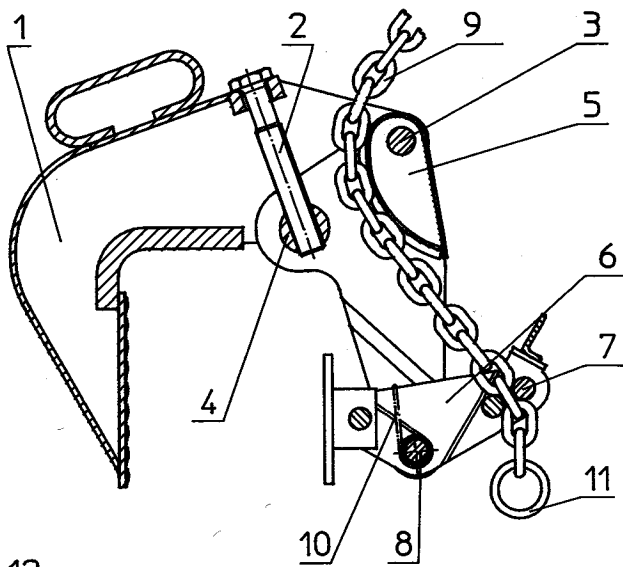


Example:

7.2 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)!



12 Typenschild

E 110

Ersatzteilliste

Rohrgehänge

Position	1	2	3	4	5	6	7	8	9	10	11	12	RG-Klaue komplett
Bestell-Nummer	Außenbügel	Verstell- spindel	Bolzen mit Splint (ø22x60)	Gewinde- bolzen (ø25x76)	Gelenk- hebel	Winkel- hebel	Bolzen mit Splint (ø16x44)	Bolzen mit Splint (ø20x51)	Anschlagkette	Biege- feder (ø2,5 rechts)	Ring	Typenschild	besteht aus je einem Teil von Pos. 1, 2, 3, 4, 5, 6, 7, 8 und 10 (1xrechts/1xlinks)
040 001													
044 134 (mit Gummi)													
044 139													
044 140 (mit Gummi)													
042 477													
040 004													
044 160													
042 494													
030 006 (ø22x60)													
031 024 (ø25x76)													
040 005													
042 492													
040 002													
044 148													
042 482													
044 166													
040 003													
044 135 (mit Gummi)													
044 141													
044 133 (mit Gummi)													
030 007 (ø16x44)													
031 026 (ø20x51)													
030 008 (ø16x53)													
031 025 (ø20x61)													
052 800 (3-str. 7x22x164)													
052 801 (3-str. 7x22x2147)													
052 804 (3-str. 9x27x1770)													
052 805 (3-str. 9x27x2391)													
052 810 (2-str. 7x22x164)													
052 811 (2-str. 9x27x1770)													
052 820 (1-str. 7x22x937)													
052 822 (1-str. 9x27x987)													
051 840 (ø2,5 rechts)													
051 841 (ø2,5 links)													
051 842 (ø3 rechts)													
051 843 (ø3 links)													
050 477													
043 004													
043 005													
043 006													
040 805													
040 808													
040 809													
040 810													
040 811													
040 813													
040 814													
110 010 Rohrgehänge RSV 1,5	3		3	3	3	3	3	3	1	3	3	1	3
110 011 Rohrgehänge RSVL 1,5/2,0m	3		3	3	3	3	3	3	1	3	3	1	3
110 020 Rohrgehänge RSVG 1,5	3		3	3	3		3	3	1	3	3	1	3
110 110 Rohrgehänge RSVE 0,5	1	1	1	1	1	1	1	1		1	1		1
110 210 Rohrgehänge RSV 1	2	2	2	2	2	2	2	2	1	2	2	1	2
110 510 Rohrgehänge RSV 3	3	3	3	3	3		3	3	1	3	3	1	3
110 511 Rohrgehänge RSVL 3	3	3	3	3	3		3	3	1	3	3	1	3
110 515 Rohrgehänge RSV 3/200 D		3	3	3	3		3	3	1	3	3	1	3
110 516 Rohrgehänge RSVL 3/200 D		3	3	3	3		3	3	1	3	3	1	3
110 520 Rohrgehänge RSVG 3	3	3	3	3	3		3	3	1	3	3	1	3
110 530 Rohrgehänge RSV 3/230	3	3	3	3		3	3	3	1	3	3	1	3
110 531 Rohrgehänge RSVL 3/230	3	3	3	3		3	3	3	1	3	3	1	3
110 540 Rohrgehänge RSVG 3/180	3	3	3	3		3	3	3	1	3	3	1	3
110 610 Rohrgehänge RSVE 1	1	1	1	1	1	1	1	1		1	1	1	1
110 710 Rohrgehänge RSV 2	2	2	2	2	2		2	2	1	2	2	1	2

Stückzahlen pro Gerät

Proof of maintenance

Warranty claim for this machine only apply for performance of the mandatory maintenance works (by an authorised specialist workshop)! After each completed performance of a maintenance interval the included form must be fill out, stamped, signed and send back to us immediately ¹⁾.

1) via e-mail to service@probst.eu / via fax or post

Operator: _____

Device type: _____

Device-No.: _____

Article -No.: _____

Year of make: _____

First inspection after 25 operating hours

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

All 50 operating hours

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

Minimum 1x per year

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

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Operator: _____

Device type: _____

Device-No.: _____

Article -No.: _____

Year of make: _____

First inspection after 25 operating hours

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

All 50 operating hours

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

Minimum 1x per year

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

Proof of maintenance

Warranty claim for this machine only apply for performance of the mandatory maintenance works (by an authorised specialist workshop)! After each completed performance of a maintenance interval the included form must be fill out, stamped, signed and send back to us immediately ¹⁾.

1) via e-mail to service@probst.eu / via fax or post

Operator: _____

Device type: _____

Device-No.: _____

Article -No.: _____

Year of make: _____

First inspection after 25 operating hours

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

All 50 operating hours

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

Minimum 1x per year

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