



Operating Instructions

- Barrel gripper Type 4P -



Original Operating Instructions

Barrel gripper

Type 4P



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Internal use is permitted for the operator of the machine in connection with the operation of the machine.

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1 Basic information

1.1 Information on the operating instructions

- It is necessary to read through the operating instructions carefully before starting any work and store them in the immediate vicinity of the system, accessible to the authorised personnel at all times. The operator of the load handling device determines who is authorised as a user.
- The operating instructions provide information about:
 - description of the dangers and instructions for safe handling of the LAM,
 - the intended use of the LAM,
 - the structure and description,
 - the mode of operation of the LAM,
 - measures to establish operational readiness and operational safety,
 - operation of the LAM,
 - maintenance and testing of the LAM.
- They are a component of the machine and therefore must be supplied with the machine.
- For better explanation, illustrations may be shown not to scale and differ from the actual model.

1.2 Abbreviations, symbols and technical terms



Note

The Note symbol is used to identify information on operation of the LAM and provides useful tips and recommendations, as well as information for efficient, economical, fault-free operation.

The following abbreviations are used in these operating instructions:

Abbreviation	Meaning
BAUER	BAUER Südlohn GmbH
LAM	Load handling device
PPE	Personal protective equipment

The following design elements are used in these operating instructions:

Symbol	Meaning
(1)	numbered action steps
⇒	Result after performing action steps
\$	Enumeration
-	Enumeration, subgroup
<i>Italic text</i>	Indicates preconditions that must be fulfilled before an action description
Chapter <i>number + title</i>	Refers to a section in this manual or further applicable documents

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Warnings are shown as follows in these operating instructions:

Each signal word is highlighted in a background colour (red, orange or yellow) according to the degree of risk of the hazardous situation.

Warning
symbol
opt. PPE
symbol(s)

SIGNAL WORD!

Nature, source and cause of a danger

Consequences of non-compliance

➤ Measures to prevent the danger; prohibitions

1.3 Conformity / standards and guidelines

This LAM has been designed and built according to state-of-the-art technology and recognised safety regulations. Conformity of the machine with the EU guidelines and standards is confirmed through the CE declaration.

1.4 Warranty and liability



Note

Conformity in accordance with the Machinery Directive 2006/42/EC and the CE marking in accordance with the Machinery Directive 2006/42/EC become invalid if unauthorised alterations of the components or their assemblies are made.

The manufacturer assumes no liability for damage due to failure to follow these operating instructions.

2 Safety by the machine



Note

This machine has been designed and built according to state-of-the-art technology and recognised safety regulations. Nonetheless, dangers to the life and limb of the user or third parties or negative effects on the machine or other property can occur during use.

2.1 Definitions

2.1.1 Warning

A warning is used to warn of a situation that can lead to injury or death.

2.1.2 Personal protective equipment (PPE)

If personal protective equipment (PPE) is required to be worn, this is indicated through additional symbols in the warnings of these operating instructions and the product safety labels/safety signs on the machine.

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2.2 Warnings, symbols and markings

2.2.1 Understand warnings



⚠ DANGER!

... refers to a dangerous situation with a high degree of risk that will lead to death or serious injury if not prevented.



⚠ WARNING!

... refers to a dangerous situation with a medium degree of risk that could lead to death or serious injury if not prevented.



⚠ CAUTION!

... refers to a dangerous situation with a low degree of risk that could lead to slight or moderate injury if not prevented.



ATTENTION

... refers to a possibly dangerous situation that can lead to property damage if not prevented.

2.2.2 Understand warning symbols

The following symbols can be used in the operating instructions according to the type of danger:



General warning of danger.



Warning: Suspended load!



Warning: Danger of crushing!



Warning: Hand injury!

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Warning: Obstacles on the floor!

2.2.3 Personal protective equipment symbols

The following symbols can be used in the operating instructions according to the area of use:



Wear helmet!



Use hand protection.



Wear safety shoes!



Read the operating manual!

2.2.4 Further symbols



Observe attachment points!

2.3 Working safely with the machine

The following section “Basic warnings and safety notes” deals with all warnings and safety notes that are valid for all stages of the machine’s life cycle. Warnings that are associated directly with an activity are an exception to this.

2.3.1 Basic warnings and safety notes

Information for the operator

This operating manual must always be stored within easy reach and readily available at the operating site of the LAM.

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Local accident prevention regulations must be observed during all work on the LAM. Furthermore, observe the DGUV provisions, in particular DGUV 100-500, chapter 2.8, and DGUV information (per the latest engineering standards), or the nationally applicable regulations.

Personnel working with the LAM must be older than 18 years of age and familiar with the functionality and application of the LAM, as well as the dangers arising from it.

The respective personnel must have received instruction on the task, and must be familiar with the operating manual, as well as any further applicable internal instructions. They must possess the following knowledge and skills in particular:

- Ability to assess the weight of the load,
- Ability to assess the location of the centre of gravity of loads,
- Knowledge of the lifting gear available,
- Load bearing capacity of the lifting gear, depending on the number of lines, type of attachment and angle of inclination,
- Selection of the correct lifting gear,
- Protection against unintentional unhooking,
- Conduct during attachment, lifting and transportation,
- Signals and gestures,
- Avoiding damage to lifting gear,
- Conduct when lowering and releasing lifting gear,
- Storage of lifting gear.

The operator is responsible for sufficient lighting in the working and transport areas!

For additional purchased components, the manufacturer's indications must be observed!

The LAM is designed for max. 16000 load changes. Upon reaching the number of load changes, the LAM must be put out of operation and scrapped, or - if possible - fully overhauled.

Information for the user

Before use, check the LAM for damage, e.g. for deformations, cracks, breakage, incomplete labelling.

The LAM shall only be used for the specified load shapes and geometries, see chapter 3.1 *Intended use*.

The specified load bearing capacity must not be exceeded, see chapter 3.4 *Technical data*.

Select the load bearing capacity and attachment type of all lifting accessories and accessory parts in accordance with the technical data for the LAM.

Lifting and load handling devices must be stored such that they are protected from weathering and aggressive substances, if safety may be impaired by these influences.

LAM and lifting gear with mechanical damage or deformations must not be further used. For permissible cross section reductions refer to DGUV 100-500, chapter 2.8, or the national regulations.

LAM is only intended for vertical lifting, diagonal pulling is prohibited.

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When moving the LAM, prevent oscillations or impacts with objects or building parts.

Lifting and transporting loads with particular hazards

Refer also in this regard to DGUV 100-500, chapter 2.8, no. 3.10 (D), or the national regulations.

Hazardous substances are substances and items that may pose danger to persons, animals or the environment in case of accidents or with incorrect handling during transport. These may be:

- Explosive substances and items; items loaded with explosive substances; igniting devices, fireworks and other goods,
- Compressed, liquefied and pressurised gases,
- Flammable liquids,
- Flammable solids; self-igniting substances; substances that produce flammable gases in contact with water,
- Igniting (oxidising) substances; organic peroxide,
- Toxic, repellent and contagious substances,
- Radioactive substances,
- Caustic substances,
- Other hazardous substances and items.

Note the following in this regard:

- ⇒ Use load-bearing equipment that will not cause damage to packaging when lifting, transporting or setting down, e.g. when transporting glass bottles, use suitable loading drawers or special transport frames.
- ⇒ In case of hazardous goods with damaged packaging, only pick these up with load handling devices that will prevent any leakage or escape.
- ⇒ Do not pick up hazardous goods with load handling devices that only hold the load through magnetic, friction or suction forces.



DANGER!

Falling or uncontrolled parts during lifting, transportation and lowering.

Risk of fatal injury and various risks of injury

- Persons are forbidden from dwelling under the suspended load or in the hazard area of the load!
- Transporting loads over the top of persons is prohibited.
- Observe the information about the intended attachment points!
- Make sure the LAM is securely attached! Observe the centre of mass!
- Only use approved lifting devices and lifting gear with sufficient load bearing capacity!
- Lifting gear must not be damaged!
- Adjust the movement of loads to the weather conditions!

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⚠ WARNING!

Unauthorised alterations of the load handling devices can endanger safe operation of the LAM!

Risk of death and various injury hazards!

- Do not perform unauthorised design changes; all changes must be discussed with and approved by BAUER.
- Modifications of the protective/safety equipment.



⚠ WARNING!

Unexpected or unintentional load movements, load toppling, misconduct by the operator.

Injuries due to crushing and bumping.

- Maintain a sufficient distance when lifting, transporting and lowering the load.
- Wear PPE (protective gloves, safety footwear and hard hat).



⚠ CAUTION!

Risk of injury due to slipping, tripping and falling.

- Do not leave any materials or tools lying on walkways or driveways.
- Immediately absorb/remove oil and other slip-enhancing materials in walking areas; use oil binding agents.

2.3.2

Machine marking



Note

The year of manufacture and the manufacturer's number can be found in the type plate of the Barrel gripper. This data is not noted in the operating instructions.

The declaration of conformity and the operating manual are restricted to the LAM supplied. A crane or lifting system is not part of this declaration of conformity.

Identification of the LAM

Manufacturer	Bauer® Südlohn	
Designation	Barrel gripper type 4P / 4P-D120 / 4P-D220	
Manufacturer's number	see order	
Tare weight of the load handling device (painted/galvanised)	4P:	10 kg / 11 kg
	4P-D120:	8 kg / 9 kg
	4P-D220:	9 kg / 10 kg
Year of manufacture	see order	
Load-bearing capacity	350 kg	
Permitted grip width	4P:	560-600 mm
	4P-D 120:	370-420 mm

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	4P-D 220:	450-500 mm
Minimum load	20 kg	

Fig. 2-1: Type plate Barrel gripper (example illustration)

2.3.3 Signage on the machine

The Barrel gripper bears the following pictogram:

- Pictogram - "Read the operating manual".

3 Description of the Barrel gripper type 4P

3.1 Intended use

The Barrel gripper type 4P serves exclusively to lift and transport 200 l steel tight-head barrels, steel lidded barrels, 220 l plastic L-ring barrels and plastic double-L-ring barrels.

The type 4P-D120/D220 serves exclusively to lift and transport 120 or 220 l plastic lidded barrels.

The Barrel gripper is to be used exclusively within the performance limits listed in section 3.4 *Technical data*.

3.2 Improper use

Improper use includes in particular:

- Any use other than the use of the machine described as "Intended use" in sec. 3.1 and further sections of these operating instructions without written permission of the manufacturer.
- Leaving the load in the raised condition.
- Use, installation, operation, maintenance or repair other than as described.
- Work performed by unqualified personnel.
- Use of unapproved, inappropriate accessories.
- Use of parts other than the original spare parts or accessories.
- Failure to follow safety and operating instructions, occupational safety and accident prevention regulations or applicable statutory regulations.
- Failure to eliminate faults in a timely fashion that could negatively impact safety.
- Lifting other loads or loads with different properties.
- Lifting the load in a manner or way that differs from the specifications.
- Transporting persons.
- Using the LAM on construction sites.
- Operating in an environment with a special atmosphere (high humidity, explosive, briny, corrosive, alkaline, etc.).

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3.3 Structure Barrel gripper type 4P

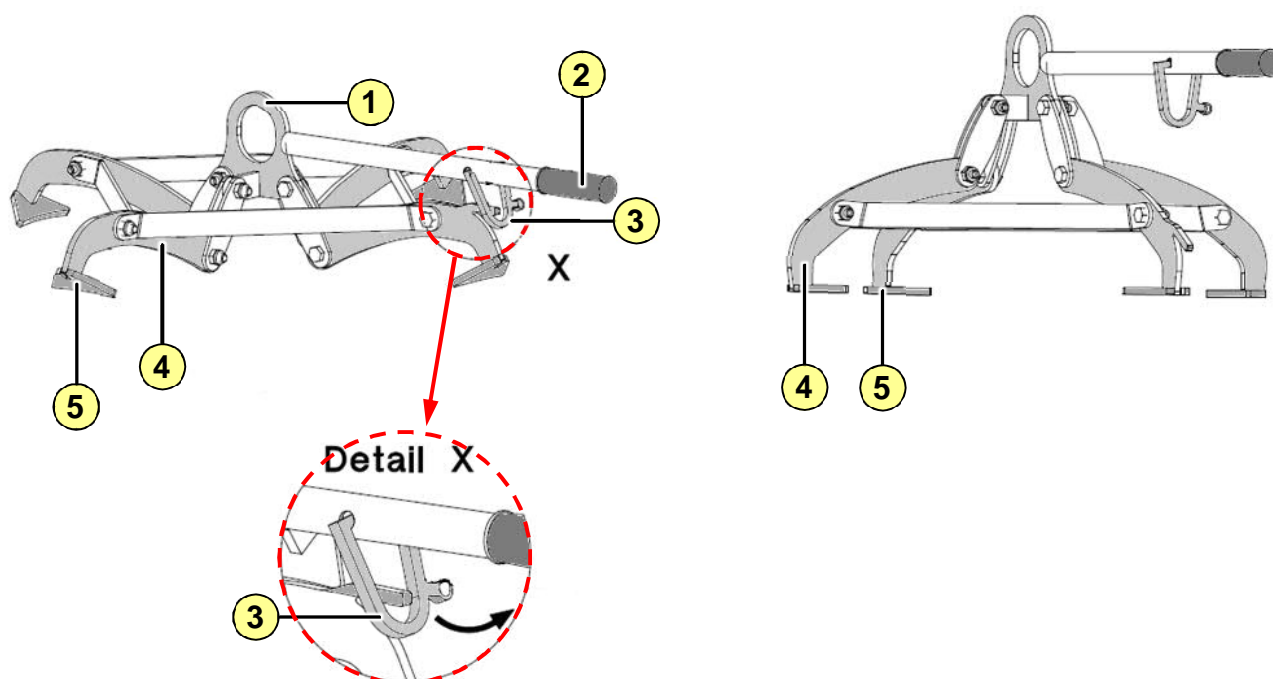


Fig. 3-1: Assemblies Barrel gripper 4P-D

Item	Description
1	Crane lug
2	Guide bar
3	Loop
4	Grip arm
5	Support surface

3.4 Technical data

Dimensions	Type	4P	4P-D120	4P-D220
Length [mm]		875	685	830
Width [mm]		675	495	590
Height [mm]		335	385	375
Clamping range [mm]		560 - 600	370 - 420	450 - 500
Operating data				
Tare weight, painted / galvanised [kg]		10 / 11	8 / 9	9 / 10
Load-bearing capacity [kg]		350		
Permissible max. number of load changes		16,000		
Environmental conditions				
Permissible ambient temperature		-20°C to max. 40°C		

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4 Setup and commissioning

The LAM is delivered in completely assembled form, is ready for operation without special commissioning and can be used with the specified lifting equipment (crane).

Before initial use, the operator checks whether the LAM corresponds to the model ordered and that the scope of delivery is complete.

A qualified person must perform an inspection before first commissioning. Only perform commissioning once any detected defects have been eliminated.

5 Operation

5.1 Safety information

DANGER!



Persons inside the transport and movement range of the LAM or the transportation of persons on the load / with the LAM.

Risk of death and danger of crushing during lifting and transportation.



- Never step underneath the raised container!
- Only lift and transport with direct visual monitoring!
- If unobstructed visibility is not possible, have a second person located outside the danger zone provide guidance.
- Ensure that persons maintain a sufficient safe distance.
- It is prohibited to transport persons on the load / with the LAM.

WARNING!



Use of unapproved lifting equipment may cause the load to fall!

Risk of fatal injury and crushing hazard in the movement area of the container.

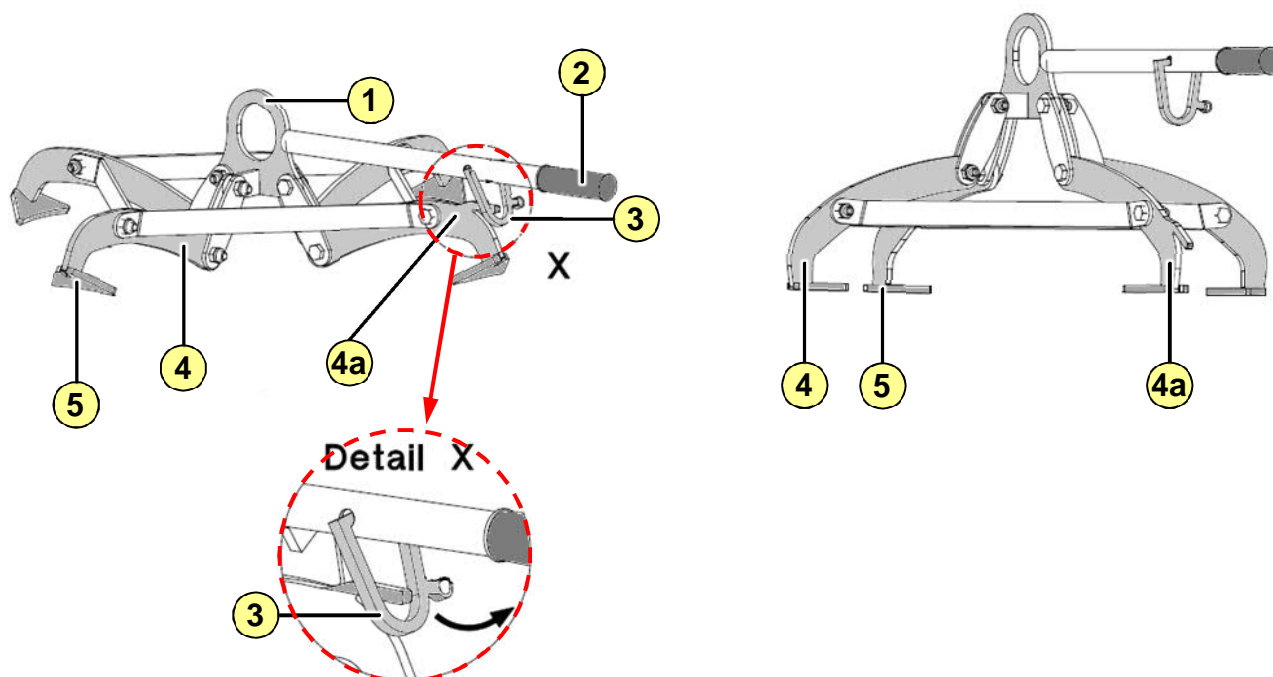
- Only use permissible, undamaged lifting devices and lifting gear with sufficient load-bearing capacity.

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5.2 Barrel transport Barrel gripper type 4P



- Attach the lifting equipment to the crane lug (1) with the hook lock.
ATTENTION: Only use tested and technically faultless lifting equipment.
- Hold the barrel gripper by the guide bar (2) and guide towards the barrel with the lifting gear.
- Position the support surfaces (5) of the grip arms (4) beneath the barrel edge.
- As soon as the barrel gripper has reached this position, release the loop (3) on the guide bar (2) from the grip arm (4a).
- Lift the barrel gripper with the lifting gear.
 - ⇒ The grip arms (4) clamp the barrel automatically.
- Slowly drive the barrel, and when doing so guide the barrel gripper by the handle (2).
ATTENTION: Avoid oscillating movements.
- Set the barrel down.
- Lower the barrel gripper onto the barrel.
 - ⇒ The grip arms (4) release from the barrel edge.
- Lock the loop (3) back on the grip arm (4a).
 - ⇒ The barrel gripper is held in an open position.
- Remove the lifting gear from the crane lug (1) of the barrel gripper.

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6 Troubleshooting and fault elimination

After unusual incidents such as an overload, the Barrel gripper must be visually inspected by a qualified person, even outside of the specified inspection periods.

The Barrel gripper must be checked for mechanical damage and deformations, and the supervisor must be informed if applicable.

Deformed parts may only be repaired after consultation with the manufacturer.

7 Maintenance

7.1 Safety



WARNING!

Servicing and repair work performed improperly can lead to various risks of injury!

- Have repair work performed only by authorised personnel.
- Use specified spare parts.

7.2 Maintenance

The Barrel gripper and the attachment elements must be checked by an expert for good condition, function, completeness, deformation, wear, damage and cracks as a minimum:

- Before first commissioning
- At least yearly
- After a repair or renewed assembly

The results must be documented in an inspection report.

7.2.1 Maintenance plan and work (operator)

Any parts that have become defective and must be replaced during maintenance can be found on the assembly drawing.

Inspection and maintenance checklist

Frequency	Object	Activity
Daily	Complete Barrel gripper	Check for wear and defects of the LAM Verify proper function
Monthly	Complete Barrel gripper	Check for wear, permanent deformation, cracks and corrosion that negatively impacts the function or load-bearing capacity

7.2.2 Maintenance plan and work (specialist personnel)

The following maintenance work must only be performed by specialist personnel of BAUER or an authority commissioned by BAUER.

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Object	Activity
Complete Barrel gripper	Inspection by qualified person (in accordance with BetrSich [Industrial Safety Ordinance] sec. 10 and 11)*
Safety equipment	Inspection by qualified person

*All inspections must be documented. Barrel gripper with identified defects must be decommissioned immediately.

7.3 Repair

Repairs of the Barrel gripper must be performed exclusively by the manufacturer or authorities commissioned by it.

Only original spare parts must be used.

8 Decommissioning, disassembly and disposal

No special requirements on decommissioning, disassembly and disposal exist.

9 Spare parts list



Ordering spare parts:

Bauer GmbH
Eichendorffstr. 62
D-46354 Südlohn
Tel.: +49 2862 709 – 0
Fax: +49 2862 709 – 156
Email: info@bauer-suedlohn.de

To process your order quickly, we need the following information:

- our spare part item number
- our spare part item name
- order quantity
- name of the container, manufacturing number and year of manufacture

10 Appendix

10.1 Declaration of conformity

The declaration of conformity is included in the delivery in the machine documentation.