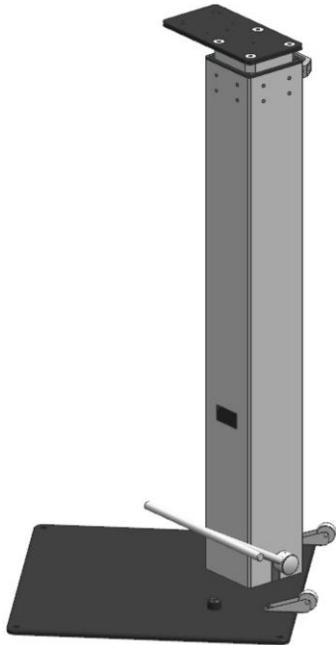




## **Bike basicLift**

**Stationary assembly fixture for bicycles and e-bikes**  
**Manual-hydraulic operation**



### **1 Description of the product**

The lifting module Shop-Flor is particularly suitable for lifting and lowering assembly fixtures, working tables and demonstration objects in industrial applications as well as for medical treatment equipments in medical applications.

In general lifting modules are used as base unit of devices for controlled lifting and lowering of loads or for height adjustment only.

#### **Accessories**

Clamping claws with adapter for an adjustment range of almost 500mm.

-Clamping claw „VAR“ with Adapter, Part no. 6352887

-Clamping claw „Park Tool“ with Adapter, Part no. 6352888

Adapter for clamping claws with adjusting range of 800 mm.

-Adapter for clamping claw, Part no. 6352931

#### **1.1 Validity of the documentation**

This document applies to the following products:

Bike basic Lift of data sheet M4102. The following types or part numbers are concerned:

- 6401 185

### **Table of contents**

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## 2 Target group of this document

- Specialists, fitters and set-up men of machines and installations with hydraulic expert knowledge.

### Qualification of the personnel

**Expert knowledge** means that the personnel must

- be in the position to read and completely understand technical specifications such as circuit diagrams and product-specific drawing documents,
- have expert knowledge (electric, hydraulic, pneumatic knowledge, etc.) of function and design of the corresponding components.

An **expert** is somebody who has due to its professional education and experiences sufficient knowledge and is familiar with the relevant regulations so that he

- can judge the entrusted works,
- can recognize the possible dangers,
- can take the required measures to eliminate dangers,
- knows the acknowledged standards, rules and guidelines of the technology.
- has the required knowledge for repair and mounting.

### Further qualification / age restrictions

The personnel must:

- be physically and mentally in the position to do the work required
- be at least 18 years old  
Young people under the age of 18 years may only work at the product supervised by a specialist, and if it is required for the vocational training (minimum age of 16 years),
- protect the working area as per the existing rules

The responsibility for different activities at the product has to be clearly defined and kept. Unclear competences are a security risk.

## 3 Symbols and signal words

### **WARNING**

#### **Person damage**

Stands for a possibly dangerous situation.

If it is not avoided, death or very severe injuries will result.

### **CAUTION**

#### **Easy injuries / property damage**

Stands for a possibly dangerous situation.

If it is not avoided, minor injuries or material damages will result.



#### **Hazardous to the environment**

The symbol stands for important information for the proper handling with materials that are hazardous to the environment.

Ignoring these notes can lead to heavy damages to the environment.



#### **Mandatory sign!**

The symbol stands for important information, necessary protection equipment, etc.

### **NOTE**

- This symbol stands for tips for users or especially useful information. This is no signal word for a dangerous or harmful situation.

## 4 For your safety

### 4.1 Basic information

The operating instructions serve for information and avoidance of dangers when installing the products into the machine as well as information and references for transport, storage and maintenance.

Only in strict compliance with these operating instructions, accidents and property damages can be avoided as well as trouble-free operation of the products can be guaranteed.

Furthermore, the consideration of the operating instructions will:

- avoid injuries
- reduce down times and repair costs,
- increase the service life of the products.

## 4.2 Safety instructions

The product was manufactured in accordance with the generally accepted rules of the technology.

Observe the safety instructions and the operating instructions given in this manual, in order to avoid personal damage or material damage.

- Read these operating instructions thoroughly and completely, before you work with the product.
- Keep these operating instructions so that they are accessible to all users at any time.
- Pay attention to the current safety regulations, regulations for accident prevention and environmental protection of the country in which the product will be used.
- Use the ROEMHELD product only in perfect technical condition.
- Observe all notes on the product.
- Use only accessories and spare parts approved by the manufacturer in order to exclude danger to persons because of not suited spare parts.
- Respect the intended use.
- You only may start up the product, when it has been found that the incomplete machine or machine, in which the product shall be mounted, corresponds to the country-specific provisions, safety regulations and standards.
- Perform a risk analysis for the incomplete machine, or the machine.

Due to the interactions between the product and the machine/fixture or the environment, risks may arise that only can be determined and minimized by the user, e.g. :

- generated forces,
- generated movements,
- Influence of hydraulic and electrical control,
- etc.

## 4.3 Warning



### Injuries due to misuse, incorrect operation or abuse!

Injuries can occur if the product is not used within the intended use and the technical performance data.

- Before start up, read the operating instructions!

## 4.4 Personal protective equipment



**For works at and with the product,  
wear safety goggles!**



**For works at and with the product,  
wear protective gloves!**



**For works at and with the product,  
wear safety shoes!**

## 5 Application

### 5.1 Intended use

The products are used in industrial / commercial applications to transform hydraulic pressure into movement and /or force. They must only be operated with hydraulic oil.

Furthermore the following belongs to possible uses:

- Use within the capacity indicated in the technical characteristics.
- Use as per operating instructions.
- Compliance with service intervals.
- Qualified and trained personnel for the corresponding activities.
- Mounting of spare parts only with the same specifications as the original part.

### 5.2 Misapplication



#### Injuries, material damages or malfunctions

- Do not use damaged or worn components.

#### Injuries, material damages or malfunctions!

Modifications can lead to weakening of the components, reduction in strength or malfunctions.

- Do not modify the product!

The use of the products is not authorised:

- For domestic use.
- For use at fairgrounds and amusement parks.
- In food processing or in areas with special hygiene regulations.
- In mines.
- In ATEX areas (in explosive and aggressive environments, e.g. explosive gases and dusts).
- If physical effects (welding currents, vibrations or others) or chemically acting media damage the seals (resistance of the seal material) or components and this can lead to functional failure or premature failure.
- For applications other than vertical lifting of loads. Hanging operation (e. g. from the ceiling) is inadmissible.

**Special solutions are available on request!**

## 6 Installation

### 6.1 Design

#### **WARNING**

##### **Injury by dropping parts!**

Some products have a heavy weight and can cause injury when dropping.

- Transport products professionally.
- Wear personal protection equipment!

Weight specifications see chapter "Technical characteristics".

#### **CAUTION**

##### **Heavy weight may drop**

- Some product types have a considerable weight. These have to be secured against dropping during transport.
- Weight specifications see chapter "Technical characteristics".

##### **Transverse forces and forced conditions!**

Side loads and forced conditions on the product lead to the premature failure.

- Avoid forced conditions (overdetermination) of the product.
- Max. forces and torques see technical characteristics.

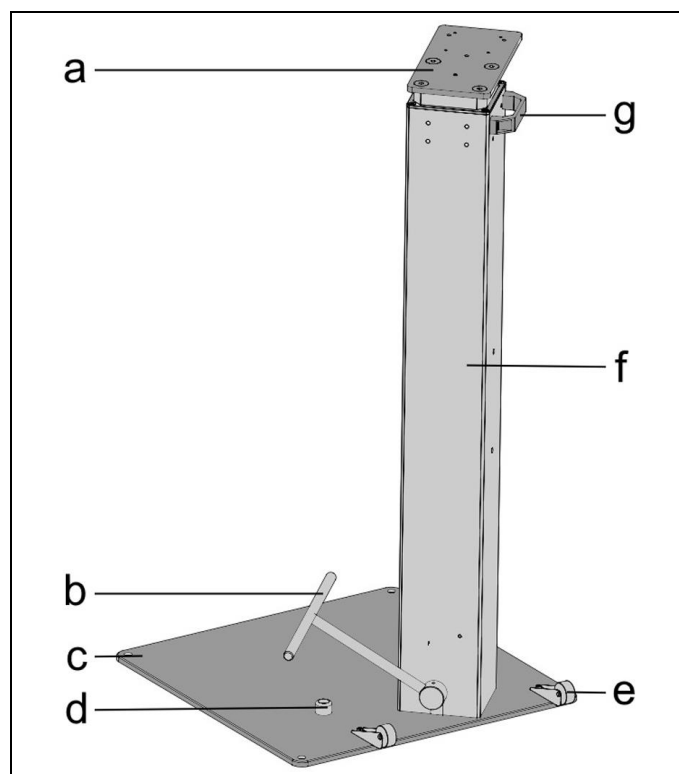


Fig. 1: Components

a Top plate	e Rollers
b Foot pedal	f Guiding profiles
c Top plate	g Handle
d Stop for foot pedal	

### 6.2 Design Accessories

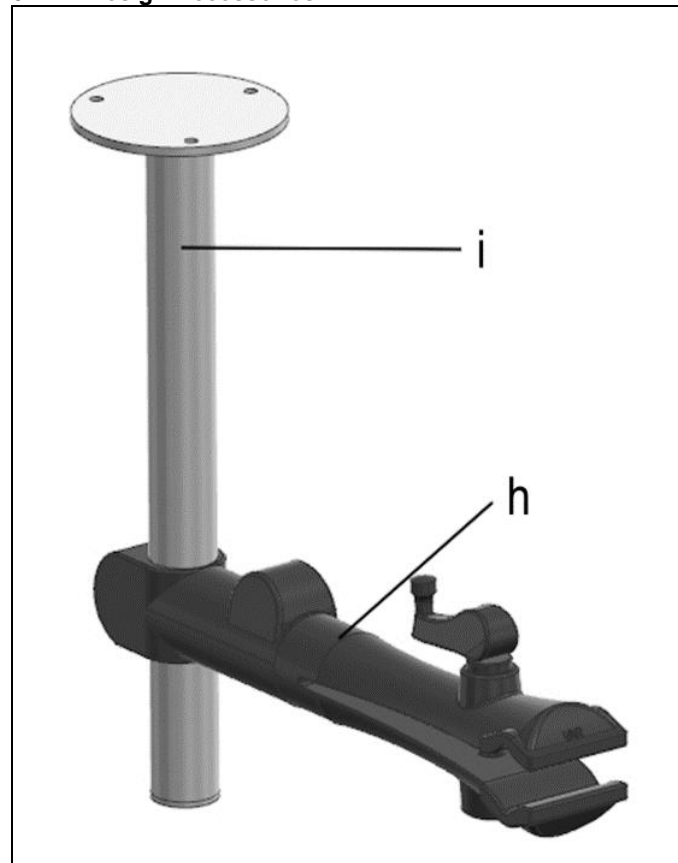


Fig. 2: Clamping Claw „VAR“ with Adapter

h Clamping Claw „VAR“	i Adapter
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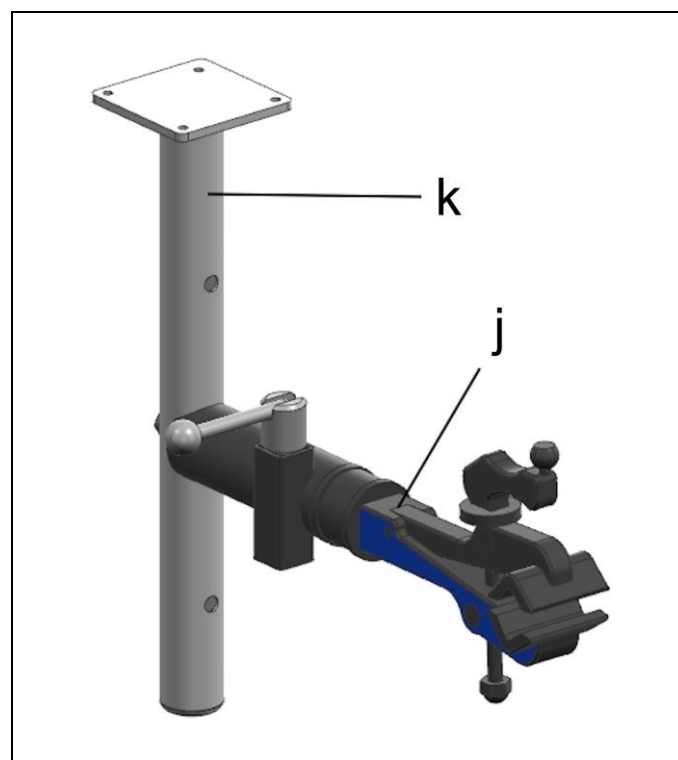


Abb. 3: Clamping Claw „Park Tool“ with Adapter

j Clamping Claw „Park Tool“	k Adapter
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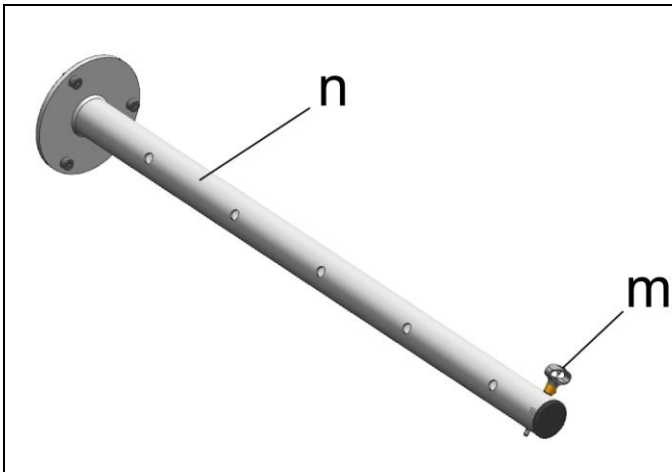


Abb. 4: Adapter for clamping claws

m locking bolt	n Adapter
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### 6.3 Mounting of the Adapter for clamping claws

#### **CAUTION**

##### Damage to internal components

Shock-type loads to the lifting axis can cause damage.

- When mounting the workpiece holders, the permissible holding torque (see Technical Data) must not be exceeded.

Various threaded holes are provided on the head plate to attach the adapters for clamping claws.

All the provided bore holes in the clamping claws and mounts must be used.

The screw-in depth for the fixing screws to be used (property class 8.8) is a minimum of 10 mm.

In off-position the specified maximum torques may occur (see technical characteristics).

The required forces and torques must be observed by the operator.

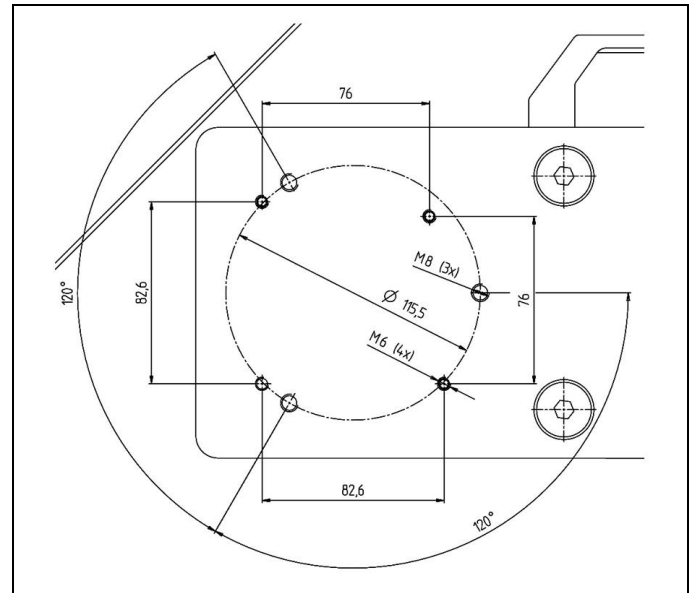


Fig. 5: Top plate fixing threads

#### **NOTE**

##### Dangers due to the connecting construction of the customer

Dangers due to the connecting construction of the customer, as e.g. squeezing points have to be excluded by the customer's design.

## 6.4 Fixing of the product

### **WARNING**

#### **Injury due to overturning product!**

- Overturning product due to missing or incorrect fixing!
- Fasten bottom plate on the floor.
- When introducing torques within the load limit (see technical characteristics) we recommend to use an additional base plate (accessory) and to secure this plate correctly.

1. Install the product so that there is a clearance zone of at least 700 mm all around for required cleaning and maintenance.
2. The product has to be mounted horizontally on a level and solid concrete floor (concrete strength grade B 25) or a rigid connecting construction provided by the customer (flatness 0.20 mm).
3. Fasten the base plate of the product with four hexagon socket head cap screws DIN 6912 – M8 onto the concrete floor or the connecting construction provided by the customer.

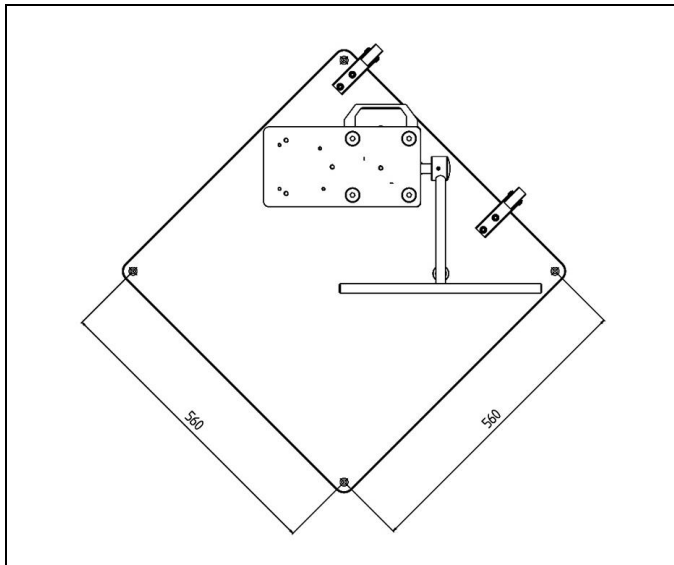


Fig. 6: mounting holes

## 7 Start up

### **WARNING**

#### **Poisoning due to contact with hydraulic oil.**

Wear, damage of the seals, aging and incorrect mounting of the seal kit by the operator can lead to escapes of oil.

Incorrect connection can lead to escapes of oil at the ports.

- For handling with hydraulic oil consider the material safety data sheet.
- Wear protection equipment.

1. Check seating of all screw connections (check tightening torques).

### **NOTE**

#### **Admissible load**

The product may only be used with push loads.

The centre of gravity should be within the traverse of the fixing screws.

If this is not observed, there may be a malfunction.

## 8 Operation

### **WARNING**

#### **Injuries due to non-compliance of the operating instructions!**

- The product may only be operated, if the operating instructions - especially the chapter "Safety instructions" have been read and understood.

#### **Injury by crushing!**

Components of the product make a movement while they are in operation, this can cause injuries.

- Keep parts of the body and items out of the working area!

#### **Injuries, material damages or malfunctions**

- Do not use damaged or worn components.

#### **Injuries due to misuse, incorrect operation or abuse!**

Injuries can occur if the product is not used within the intended use and the technical performance data.

- Before start up, read the operating instructions!

The operator is obliged to report immediately any changes at the product that may affect the safety to the safety expert or to the person who is responsible for safety and to stop operating the product.

### 8.1 Working place

The working place is designed in front of the lifting module.

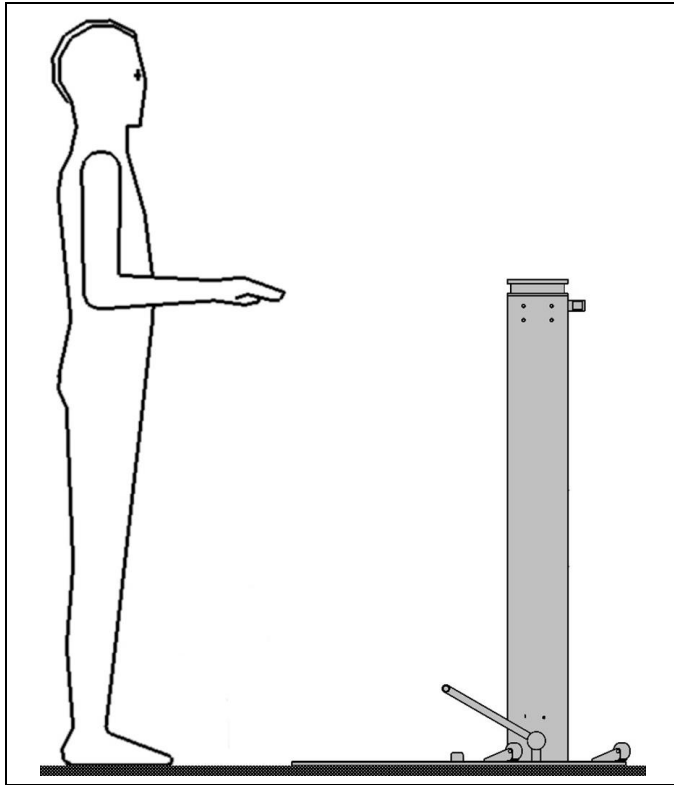


Fig. 7: Working place

### 8.2 Handling emergency situations

The product may not be operated if there is an emergency situation.

### 8.3 Lifting

The stroke movement is produced by the internal, hermetically-sealed, hydraulic lifting jack with foot pedal with oil being pumped by means of a piston into a plunger cylinder. To lift the top plate, the foot pedal has to be depressed by approx. 30° several times. The pedal returns to its off-position by means of a return spring.

### 8.4 Lowering

To lower the top plate, the foot pedal has to be pressed upwards by approx. 10°. Thereby the oil returns due to the weight of the user's load from the plunger cylinder into the reservoir, the top plate lowers.

## 9 Maintenance

### 9.1 Plan for maintenance

Maintenance works	Interval	by...
Cleaning, visual check of the lifting module and inspection of the guide unit	daily	operator
Control of the fixing screws, retighten if required. Control of the guide unit	half-yearly checks	expert
Check smooth running with little load over the entire stroke range	yearly	expert
Check smooth running with load over the entire stroke range	yearly	expert
Check the check valve of the internal lifting jack with load	yearly	expert
Revision by the manufacturer (recommendation)	after 50,000 cycles (lifting and lowering)	ROEMHELD service staff
Repair	in case of damages	ROEMHELD service staff

#### Note

Pay attention to the qualification of the personnel.

### 9.2 Cleaning

#### WARNING

##### Danger of injury due to a lifting or lowering movement!

- Do not reach into the stroke area during the lifting or lowering movement.

The following cleaning works have to be effected daily at the mechanical components.

- Clean with cleaning clothes or cleaning rags.

#### 9.2.1 Daily checks

#### WARNING

##### Danger of injury due to a lifting or lowering movement!

- Do not reach into the stroke area during the lifting or lowering movement.
- Visual check of the lifting module
- Check the guide unit for damages and possible running marks, repair if required.



### 9.2.2 Half-yearly checks

- Check all fixing screws of the lifting module, retighten if required.
- Check all cable fixings and fittings, retighten if required.
- Check the wear of the guide unit based on the guiding clearance. If the clearance exceeds 0.5 mm, the guiding elements have to be exchanged. (See chapter repair).

### 9.2.3 Yearly checks

To maintain the product in a safe condition and ready for operation, the function safety of the internal lifting jack has to be checked annually by an expert (see maintenance schedule).

### 9.3 Check smooth running of the product with little load over the entire stroke range

#### CAUTION

##### Function of the product!

If the product does not work perfectly, even if only partial stroke ranges are affected, the product must no longer be used.

- Observe the checking intervals.
- Press the foot pedal upwards until the top plate is completely lowered.
- Fix the test weight at the top plate (10% of the nominal load).
- Depress the foot pedal several times until the top plate is completely lifted.
- Press the foot pedal upwards until the top plate is completely lowered.

### 9.4 Check smooth running of the product with load over the entire stroke range

#### CAUTION

##### Function of the product!

If the product does not work perfectly, even if only partial stroke ranges are affected, the product must no longer be used.

- Observe the checking intervals.
- Press the foot pedal upwards until the top plate is completely lowered.
- Fix the test weight at the top plate (nominal load).
- Depress the foot pedal several times until the top plate is completely lifted.
- Press the foot pedal upwards until the top plate is completely lowered.

### 9.5 Check the check valve of the internal lifting jack with load

#### NOTE

##### Operating set

If the top plate of the product lowers independently, it may no longer be operated!

- Press the foot pedal upwards until the top plate is completely lowered.
- Fix the test weight at the top plate (nominal load).
- Depress the foot pedal several times until the top plate is completely lifted.
- Top plate may not lower independently

### 9.6 Repair

#### NOTE

##### Repair works

- Repair works, as e.g. the change of the interior lifting jack may only be effected by the ROEMHELD service technicians.

## 10 Trouble shooting

### CAUTION

#### All work by service personnel only!

- All works only to be effected by ROEMHELD service staff.

Trouble	Cause	Remedy
Top plate does not lift or lower after the operation of the foot pedal	Internal lifting jack defect	Replace internal lifting jack
Top plate lowers without operation of the foot pedal	Internal lifting jack defect	Replace internal lifting jack



## 11 Accessory

Data sheet	M4102
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### General characteristics of clamping claw "VAR" with Adapter

Weight 6,0 kg

Part no. 6352887

### General characteristics of clamping claw „Park Tool“ with Adapter

Weight 6,0 kg

Part no.. 6352888

### General characteristics of Adapter for clamping claws

Material: steel, galvanized

Weight 3,0 kg

Part no. 6352931

Further accessories	M8902
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## 12 Technical characteristics

Max. lifting force	400 N
Functional principle	Manual-hydraulic
Operation	Foot pedal
Lifting profile	Aluminium, colourless anodised
Top and bottom plate	Aluminium, black anodised

Type	Number of operations	Weight	Stroke
6401 185	19	70 kg	800 mm

### Side loads

Max. load torque $M_z$	50 Nm
Max. load torque $M_x$ or $M_y$	100 Nm

## NOTICE

In the case of eccentric loads, it is recommended to compensate for these with counterweights. In the off-position, the indicated maximum torques may occur.

The forces and torques have to be taken into consideration by the operator. During the lifting motion, only 50 % of the maximum values are admitted.

### Tightening torques

The tightening torques for the fixing screws of the customer's connecting construction are to be taken from VDI Guideline 2230.

### Emissions

The A valued continuous sound level of the lifting module is less than 70 dB(A) during operation.

## 13 Disposal



### Hazardous to the environment

Due to possible environmental pollution, the individual components must be disposed only by an authorised expert company.

The individual materials have to be disposed as per the existing regulations and directives as well as the environmental conditions.

Special attention has to be drawn to the disposal of components with residual portions of hydraulic fluids. The instructions for the disposal at the material safety data sheet have to be considered.

For the disposal of electrical and electronic components (e.g. stroke measuring systems, proximity switches, etc.) country-specific legal regulations and specifications have to be kept.

## 14 Declaration of conformity



### Manufacturer

Römheld GmbH Friedrichshütte  
Römheldstraße 1-5  
35321 Laubach, Germany  
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Fax: +49 (0) 64 05 / 89-211  
E-mail: [info@roemheld.de](mailto:info@roemheld.de)  
[www.roemheld.com](http://www.roemheld.com)

### Responsible person for the documentation:

Dipl.-Ing. (FH) Jürgen Niesner, Tel.: +49(0)6405 89-0.

This declaration of conformity applies to the following products:  
Bike basic Lift of data sheet M4102. The following types or part numbers are concerned:

- 6401 185

We hereby declare that the machine described in its design and construction as well as in the version we have placed on the market complies with the essential health and safety requirements according to the following EC directives.

The following additional EU directives were applied:

- **2006/42/EC**, Machinery directive [[www.eur-lex.europa.eu](http://www.eur-lex.europa.eu)]

The following harmonised standards have been applied:

**DIN EN ISO 12100**, 2011-03, Safety of machinery; Basic concepts, General principles for design (replacement for part 1 and 2)

**DIN EN 60204-1**; 2007-06, Safety of machinery - Electrical equipment of machines, Part 1: General requirements

The technical documents according to the specified guidelines were created for the products.

The manufacturer obligates to provide the special documentation of the products to national authorities on demand.

If the product is modified and not approved by us, this declaration will become invalid.



Ewgeni Schleining  
Development Team Leader MH

**Römheld GmbH**  
**Friedrichshütte**

Laubach, 11.02.2025