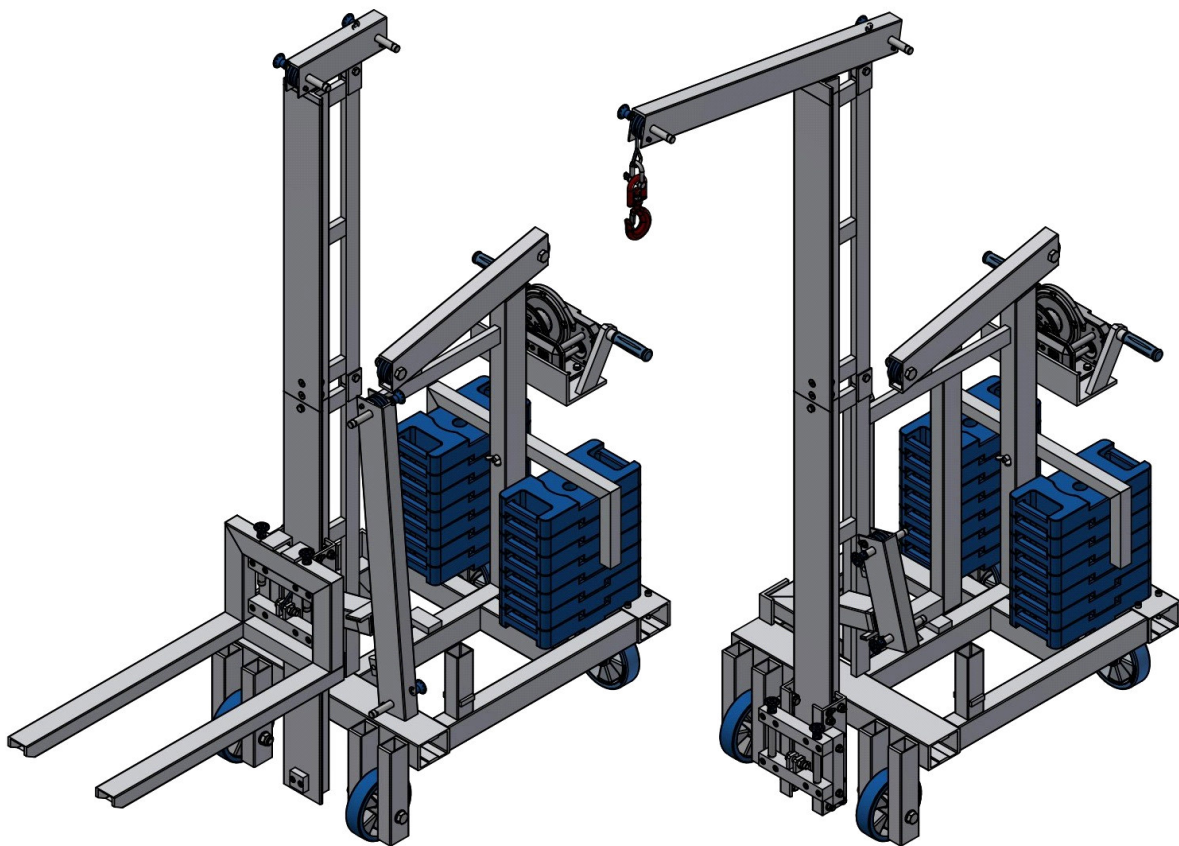


Aluminium Multilift

Sample Manual (June 2026)



USER INFORMATION

The assembly, operating, and maintenance instructions for SCHILLING products must always be followed.
Users and/or their personnel must read the instructions thoroughly and fully understand them before
using the product.

Keep this user information for future reference!



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1 Introduction

- ▲ The aluminium multilift is designed for vertical lifting and lowering, as well as horizontal movement, of loads using a lifting fork or a boom arm.
- ▲ The aluminium multilift shall only be used on a level and stable surface.
- ▲ This user information forms an integral part of the product and shall be considered as part of the overarching risk assessment and handling instructions for all lifting and load-handling operations.
- ▲ This user information shall be available to all users at all times.
- ▲ Please read this user information carefully before using the product.
- ▲ This user information describes the safe assembly, operation, maintenance, repair, disassembly, and disposal of the product.
- ▲ In addition to these instructions for use, all occupational health and safety regulations applicable in the country and environment in which the product is used, as well as all other relevant general regulations, must be strictly observed to ensure safe and proper use.
- ▲ Images and illustrations in this user information may differ from the actual product supplied.
- ▲ Unauthorized modifications to the product, as well as the use of self-fabricated auxiliary equipment, are prohibited.

1.1 Manufacturer



1.2 Terms and Conditions

- ▲ In the case of direct sales, the general terms and conditions may be obtained from the manufacturer or via their website.
- ▲ If the device has been purchased through an intermediary, please contact your distributor or salesperson.

2 Presentation of Information

This document uses symbols, terminology, instructions for use, and enumerations as described in Chapters 2.1 and 2.2 below.

2.1 Symbols and terminology

Safety instructions

Safety instructions are classified and presented as follows:

HAZARD

A safety instruction designated as “HAZARD” indicates a risk that will directly and inevitably result in death or severe, permanent injury.

WARNING

A safety instruction designated as “WARNING” indicates a risk that may result in severe injury or death.

CAUTION

A safety instruction designated as “CAUTION” indicates a risk that may result in minor to moderate injury.

NOTE

A safety instruction designated as “NOTE” indicates a risk that may result in material damage.

Useful information and tips



INFO

This symbol denotes useful information and practical tips.

Disposal



INFORMATION FOR DISPOSAL

of packaging materials, lifting devices, etc.

2.2 Instructions for Use and Enumerations

All instructions for use are presented in chronological order and numbered, for example:

1. Step 1
2. Step 2

Outcomes of actions are indicated by an arrow:

- Outcome or device response

Instructions for use that do not have to be carried out in a particular sequence are indicated as follows:

- Step
- Step

Outcomes of actions are indicated by an arrow:

- Outcome or device response

Enumerations are indicated by indents:

- Enumeration

3 Declaration of Conformity

3.1 EC Declaration of Conformity

Pursuant to the EC Machinery Directive 2006/42/EC, Appendix II A

We hereby declare that the machine described below complies, in its design and construction and in the version supplied by us, with the general health and safety requirements of EC Directive 2006/42/EC and. This declaration shall become invalid if the machine is modified without our prior approval.

Manufacturer:

SCHILLING Kran- und Hebertechnik GmbH
Ernst-Zimmermann-Str. 9-11
88045 Friedrichshafen
Deutschland
Telefon: +49 (0) 7541 60404-0



Description and Identification of the Machine:

Designation: Aluminium Multilift
Item Number: **Sample Manual**
Serial Number:
Load Capacity:
Year of Manufacture:

Applied harmonised standards, in particular:

- DIN EN 13001-1:2015 – Cranes – General Design – Part 1: General Principles and Requirements
- DIN EN 13001-2:2021 – Cranes – General Design – T2 Load Actions
- EN 13155:2003+A2:2009 – Cranes – Safety - Non-Fixed Load Lifting Attachments
- EN 16851:2017+A1:2020 – Cranes – Light Crane Systems

Signature:

Martin Schilling – Managing Director

Date:

Authorized person for Documentation: Danny Büdinger – Technician (mechanical technology)

3.2 UK Declaration of Conformity

Supply of Machinery (Safety) Regulations 2008: Great Britain

We hereby declare that the machine described below complies, in its design and construction and in the version supplied by us, with the general health and safety requirements of the Supply of Machinery (Safety) Regulations 2008: Great Britain.

This declaration shall become invalid if the machine is modified without our prior approval.

Manufacturer:

SCHILLING Kran- und Hebertechnik GmbH
Ernst-Zimmermann-Str. 9-11
88045 Friedrichshafen
Deutschland
Telefon: +49 (0) 7541 60404-0



Description and Identification of the Machine:

Designation: Aluminium Multilift
Item Number: **Sample Manual**
Serial Number:
Load Capacity:
Year of Manufacture:

Applied harmonised standards, in particular:

- BS EN 13001-1:2015 – Cranes - General design - Part 1: General Principles and Requirements
- BS EN 13001-2:2014 – Crane Safety - General design - Part 2: Load Actions
- BS EN 1999-1-1:2007+A2:2013 – Design of Aluminium Structures – General Structural Rules

Signature:

Martin Schilling – Managing Director

Date:

Authorized person for Documentation: Danny Büdinger – Technician (mechanical technology)

1 Safety

Please read the following safety instructions thoroughly before putting the product into operation.

Chapters 4.1 to 4.3 outline the general rules of conduct to be observed when handling the product.

Instructions in the subsequent chapters marked with a  must be followed to prevent risks to persons and property. Safety notes related to specific instructions are provided before the corresponding step and must be strictly observed.

1.1 General Safety Notes

- Please read this user information carefully before using the product.
- Observe all safety notes.
- This user information shall be available to all users at all times.
- The product shall be operated only by suitably qualified personnel (see Table 1).
- In addition to these instructions for use, all occupational health and safety regulations applicable in the country and environment in which the product is used, as well as all other relevant general regulations, must be strictly observed to ensure safe and proper use.
- Any damage compromising safety shall be repaired immediately.
- Perform all work prudently and with due care.
- Never stand or walk beneath a suspended load.
- The specified load capacity shall always be observed.

Einteilung der Qualifikationsbereiche

Field of Activity	Qualification	Specialist Knowledge
Delivery and Transport	Distributor, Carrier	Proof of Load Securing Training
Storage	Warehouse Personnel	Storage and Retrieval of Technical Equipment
Assembly, Disassembly	Qualified Personnel	Professional Experience in Assembly and Disassembly of Technical Equipment
Operation, Simple Visual Inspection	Qualified Personnel	Trained Personnel with Advanced Technical Knowledge, Awareness of Accident Prevention Regulations
Maintenance, Repair, Commissioning	Qualified Personnel, Specialist	Authorized Qualified Personnel with Advanced Technical Knowledge, Knowledge with Occupational Health and Safety Regulations
Disposal	Qualified Personnel	Knowledge of Regulations for Proper Disposal and Recycling

Tab. 1: Overview

1.2 Approved use

- Vertical lifting and lowering, as well as horizontal movement, of loads on a level and stable surface.
- The specified load capacity shall always be observed.
- Suitable for operation within temperature ranges from -20 °C to +50 °C.
- Maximum permissible wind speed: < 40 km/h.
- The center of gravity shall remain between the wheels at all times to ensure the stability of the aluminium multilift.
- For high loads, account for increased braking distance. Avoid rapid movements.

1.3 Non-Approved Use

- Exceeding the maximum load capacity.
- Making structural modifications to the product.
- Standing or walking beneath a suspended load.
- Pulling a load diagonally.
- Forcefully freeing loads that are stuck.
- Dragging loads along the ground.
- Transporting persons or animals.

The above list does not claim to be complete. Any use not explicitly permitted shall be considered non-approved.

2 Technical Data

Description: Aluminium Multilift

Item Number: Sample Manual

Serial Number:

Load Capacity:

Year of Manufacture:

Notes:

Further information can be found using the article number in the enclosed documentation or on our website.

3 General Data

3.1 The following data are engraved on the individual components of the product

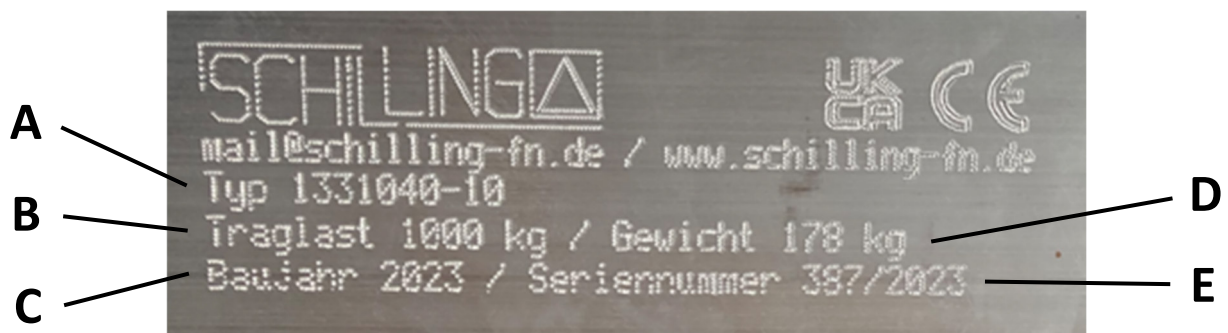
Manufacturer Address Label



Nominal Load Label



Example of a SCHILLING Engraving:



Explanation of the Engraving Details:

- A: Type
- B: Load Capacity
- C: Year of Manufacture
- D: Total Weight
- E: Serial Number

4 Delivery and Transportation

4.1 Scope of Delivery

Immediately check the delivery for completeness against the enclosed delivery note.

You may also use the product overview and parts list to verify that all items have been delivered (see Chapter "Overview of Individual Components").

If any parts are missing, contact your supplier immediately.

Claims for missing parts cannot be accepted if notification is delayed, especially if the product has already been used.

4.2 Transportation

The product is inspected and properly packaged prior to delivery.

NOTE

Damage to the Product

Incorrect transportation may cause damage to the product.

- Always transport the product as intended.
- Use a suitable means of transport.
- Ensure that the product is properly secured during transportation.

4.3 Storage

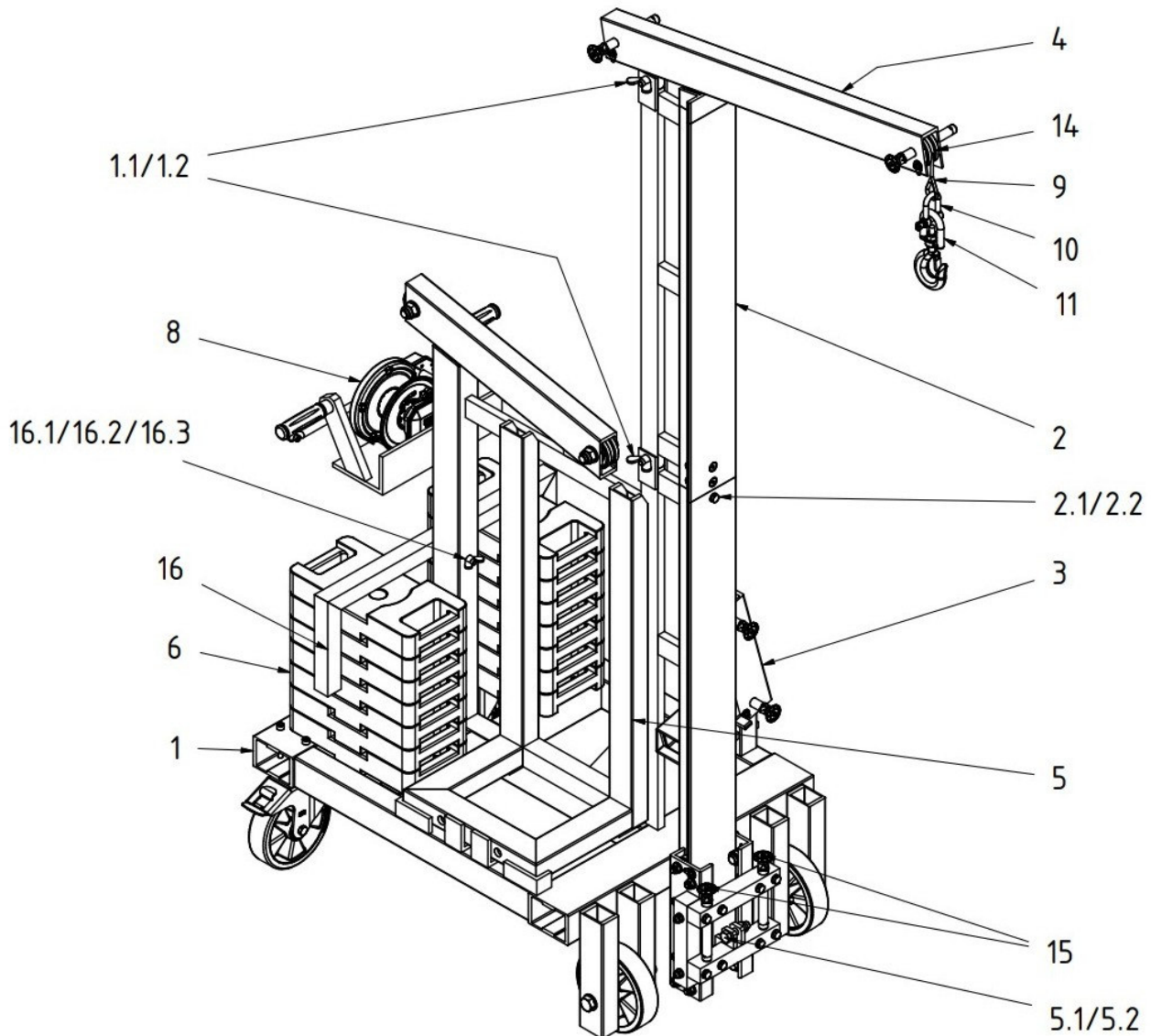
NOTE

Damage to the Product

Incorrect storage may cause damage to the product.

- Always store the product as intended.
- Store the product in a clean and dry place.
- Protect the product from:
 - o constant humidity or outdoor storage
 - o contamination
 - o physical damage
 - o corrosion

5 Overview of Individual Components



Parts List

Item	Name	Qty	Item	Name	Qty
1	Base Frame	1	6	Counterweight	14
1.1	Hex Bolt, M12x55	2	8	Manual/ Wire Rope Winch	1
1.2	Wing Nut, M12	2	9	Rope	1
2	Mast Extension	1	10	Shackle	1
2.1	Fastening Screw, M10x30	1	11	Safety Load Hook	1
2.2	Washer, 10	1	14	Pulley	6
3	Deflection Head	1	15	Bolt Ø20 (unlosable)	6
4	Extension Arm	1	16	Safety Bracket	1
5	Lifting Fork	1	16.1	Hex Bolt, M10x140	1
5.1	Hex Bolt, M16x60	1	16.2	Washer, 10	1
5.2	Hex Nut, M16	1	16.3	Wing Nut, M10	1

6 Assembly of the Aluminium Multilift



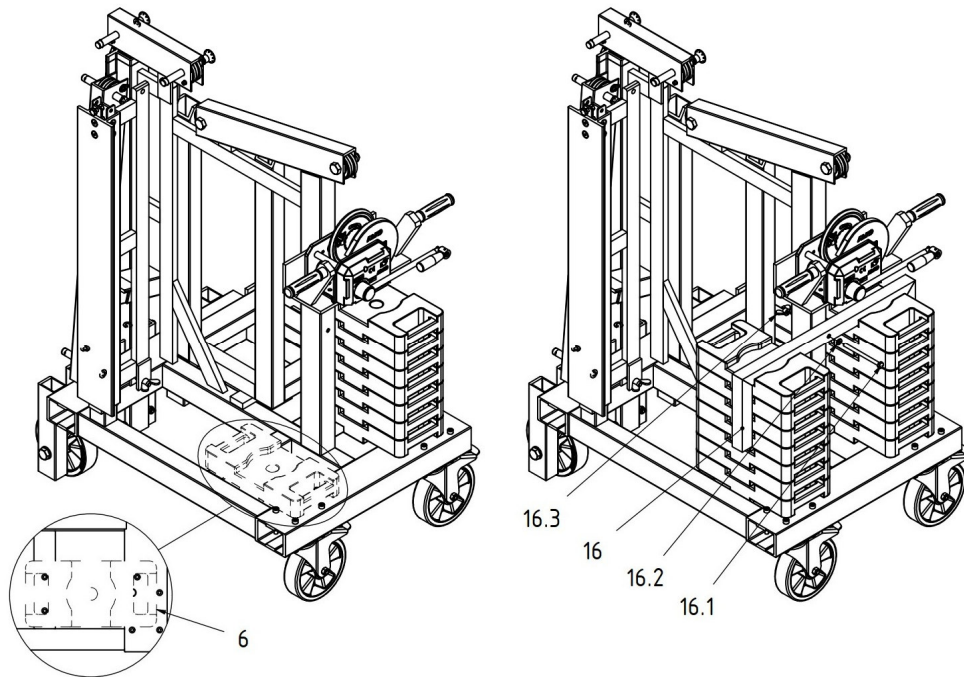
INFO

Recommended Personnel, Tools, and Equipment for Assembling the Multilift:

- 1-2 persons
- Socket wrench or open-end wrench SW17, SW19, SW24

⚠ CAUTION

The aluminium multilift contains pinch points that may result in injury.
Carry out assembly with due care and caution.



1. Installation of Counterweights for Operation:

The Multilift must only be operated with the designated counterweights.

1.1.

To install the counterweights (6), remove the safety bracket (16) by loosening the wing nut (16.3) and removing the hex bolt (16.1).

1.2.

Stack 7 weights on each side at the designated position between the bolt heads.

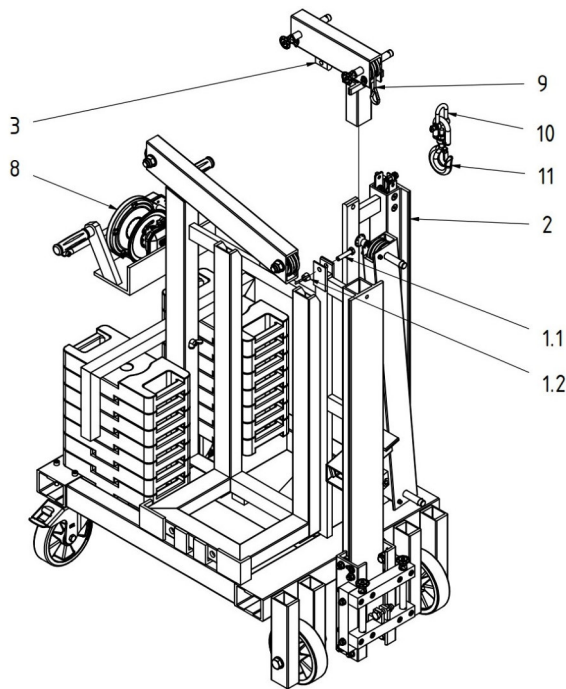
1.3.

Secure the stacked weights by installing the safety bracket (16) using the hex bolt (16.1), the washer (16.2) and the wing nut (16.3).

Assembly of the Aluminium Multilift for Fork Operation:

⚠ CAUTION

The aluminium multilift contains pinch points that may result in injury.
Carry out assembly with due care and caution.



2. Preparation for Assembly of the Mast Extension:

2.1.

Remove the shackle (10) with the safety load hook (11).

2.2.

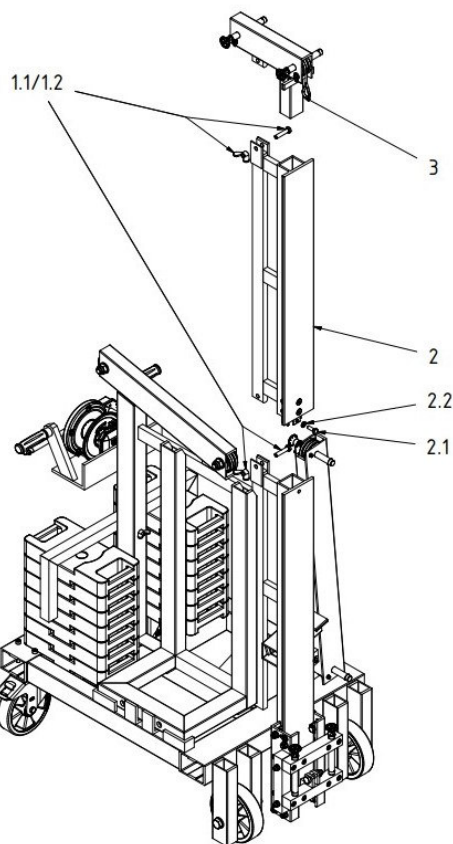
Unwind the rope (9) from the winch (8) by approximately 2.5 times the length of the mast extension (2).

2.3.

Loosen the wing nut (1.2) and remove the hex bolt (1.1) securing the deflection head (3).

2.4.

Remove the deflection head (3) and set it aside.



3. Assembly of the Mast Extension:

3.1.

Remove the mast extension (2) from its transport position on the base frame (1).

3.2.

Remove the fastening screw (2.1) and the washer (2.2) from the mast extension (2).

3.3.

Insert the mast extension (2) into the base frame (1) as shown.

3.4.

Secure the mast extension (2) using the washer (2.2) and the fastening screw (2.1), as well as the hex bolt (1.1) and the wing nut (1.2).

3.5.

Loose the wing nut (1.2) at the top of the extension mast (2) and remove the hex bolt (1.1).

3.6.

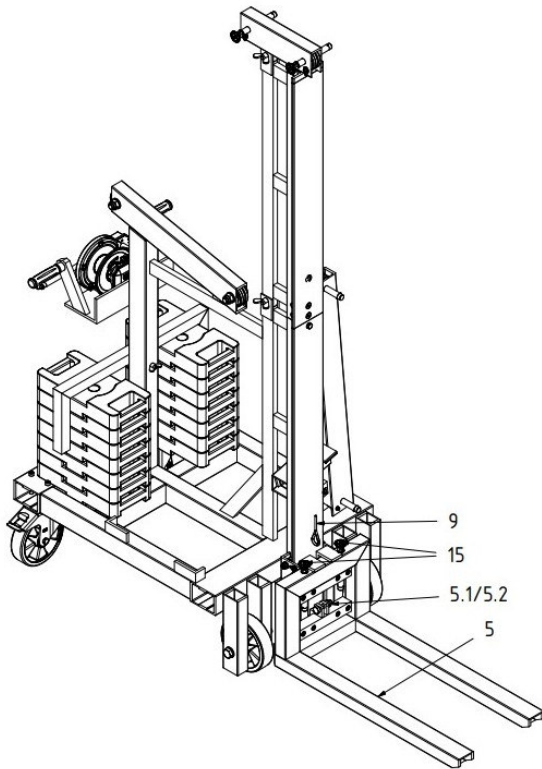
Insert the deflection head (3) into the mast extension (2).

3.7.

Secure the deflection head (3) using hex bolt (1.1) and wing nut (1.2).

⚠ CAUTION

The aluminium multilift contains pinch points that may result in injury.
Carry out assembly with due care and caution.



4. Assembly of the Lifting Fork:

4.1.

Remove the two bolts (15) from the carriage.

4.2.

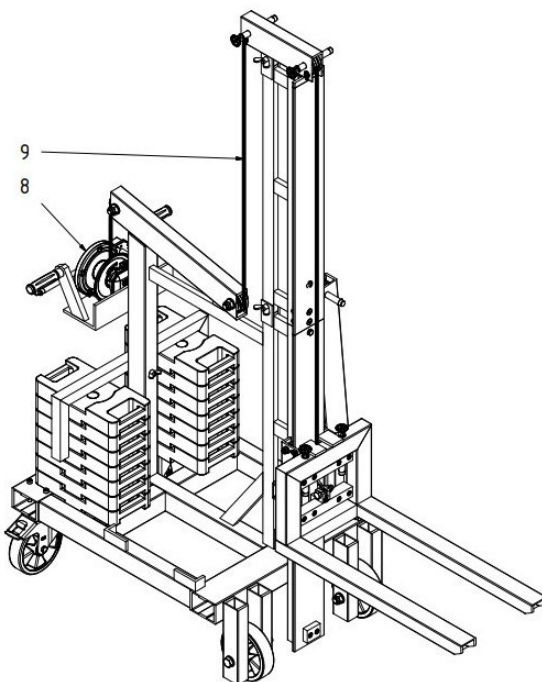
Remove the lifting fork (5) from the transport position on the base frame (1) and hook it into the carriage.

4.3.

Secure the lifting fork (5) in the carriage using the two bolts (15).

4.4.

Insert the thimble of the rope (9) behind the carriage and secure it to the carriage using the hex bolt (5.1) and the hex nut (5.2).



5. Final Assembly for Fork Operation:

5.1.

Tension the rope (9) using the winch (8). Ensure that the rope remains under tension during winding.

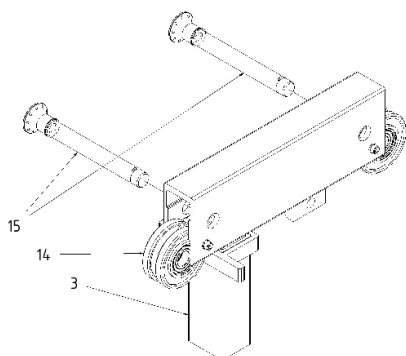
5.2.

Perform a functional test to ensure that the carriage moves smoothly.

⚠ CAUTION

The aluminium multilift contains pinch points that may result in injury.
Carry out assembly with due care and caution.

Assembly of the Aluminium Multilift for Extension Arm Operation:



6. Rope removal:

6.1.

Remove the two bolts (15) from the deflection head (3).

6.2.

Swivel the two pulleys (14) outwards.

6.3.

The rope (9) with the thimble can now be unthreaded.

6.4.

The rope is installed in the same way.
This also applies to the extension arm (4).

7. Assembly of the Extension Arm:

7.1.

Loosen the wing nut (1.2) at the upper end of the mast extension (2) and remove the hex bolt (1.1).
Remove the deflection head (3).

7.2.

Place the deflection head (3) in the transport position on the base frame (1).

7.3.

Remove the extension arm (2) from its transport position on the base frame (1) and insert it into the mast extension (2).

7.4.

Secure the extension arm (4) using hex bolt (1.1) and wing nut (1.2).

7.5.

Thread the rope (9) into the extension arm (4) as described in section 6.

7.6.

Attach the shackle (10) with the safety load hook (11) to the rope (9).

7.7.

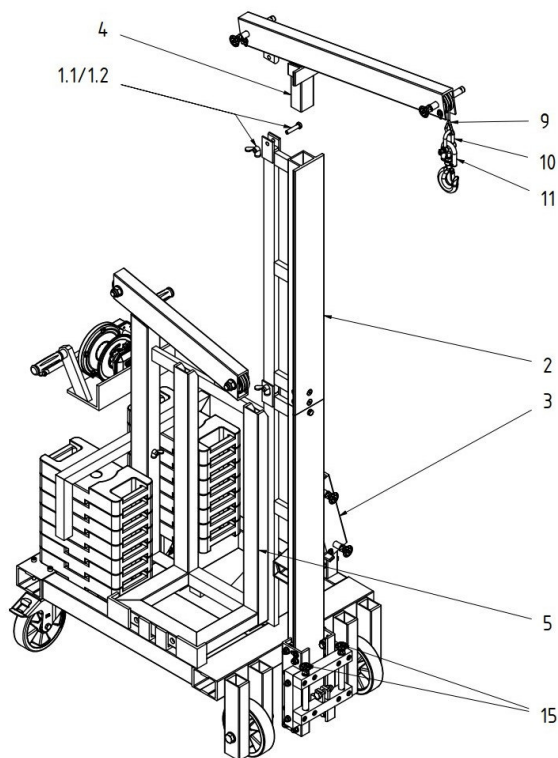
Remove the two bolts (15) from the carriage.

7.8.

Remove the lifting fork (5) from the carriage and place it in the transport position on the base frame (1).

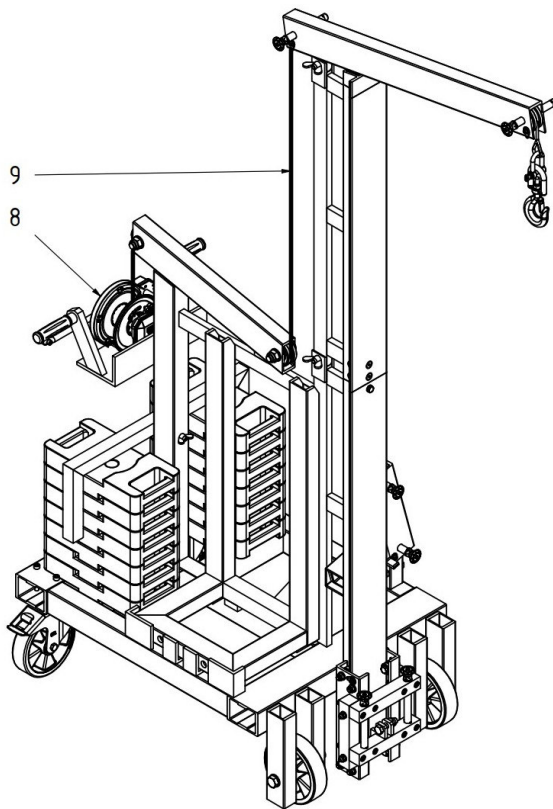
7.9.

Reinsert the two bolts (15) into the designated holes on the carriage.



⚠ CAUTION

The aluminium multilift contains pinch points that may result in injury.
Carry out assembly with due care and caution.



8. Final Assembly for Extension Arm Operation:

8.1.

Tension the rope (9) using the winch (8). Ensure that the rope remains under tension during winding.

8.2.

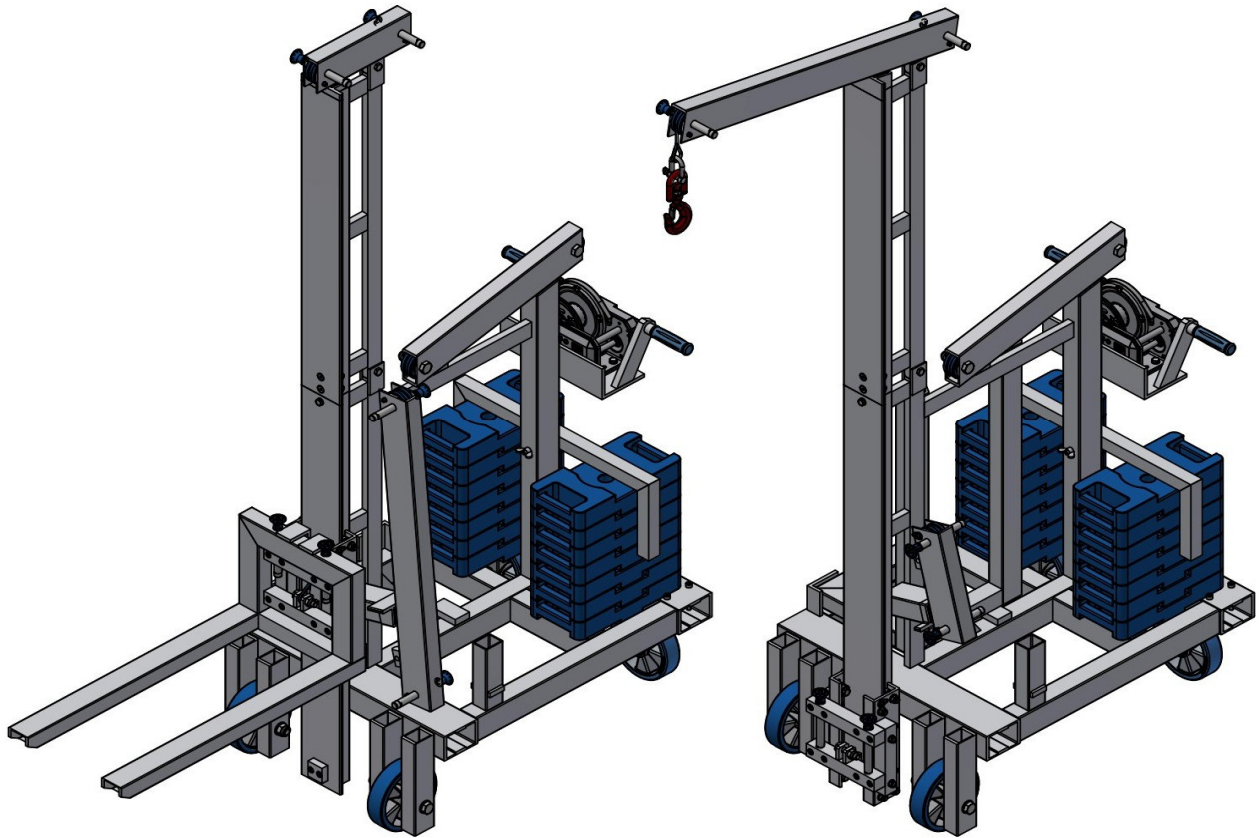
Perform a functional test to ensure that the rope runs smoothly.

9. Operation without Mast Extension:

9.1.

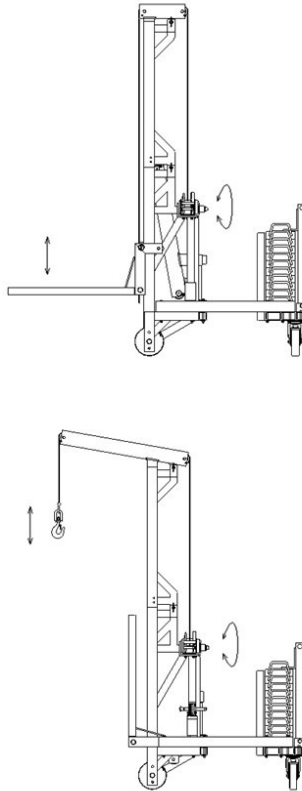
The Multilift can also be operated without the mast extension (2).

For this purpose, the mast extension is removed and placed in the designated transport holder on the base frame (1).



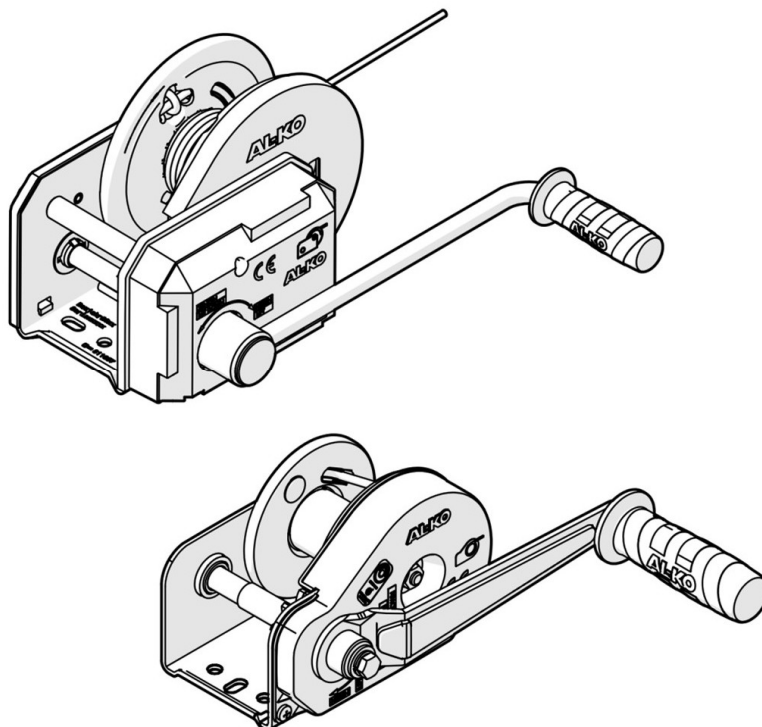
- The Aluminium Multilift is now fully assembled.
- To disassemble, follow the assembly steps in reverse order.

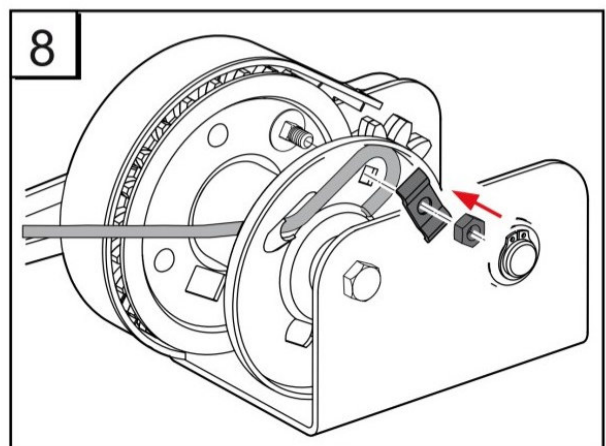
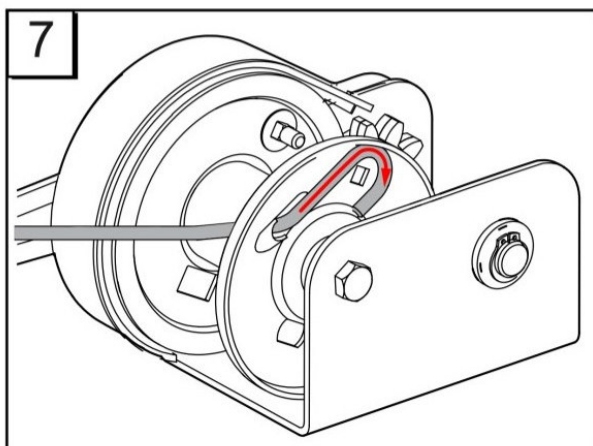
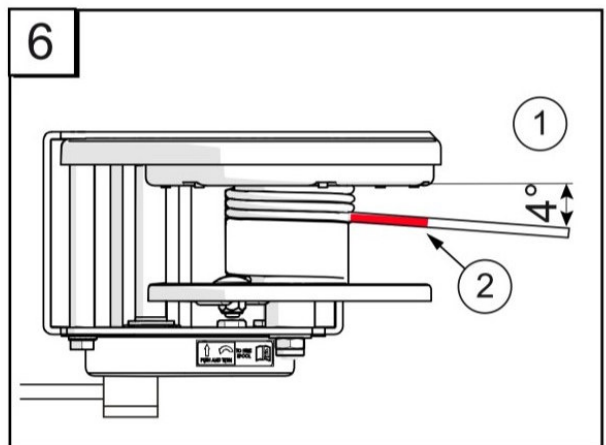
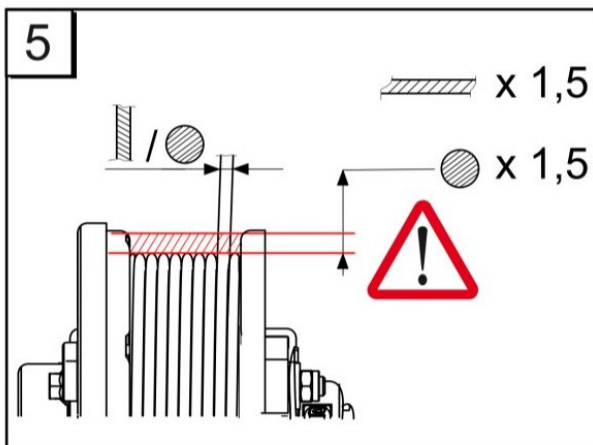
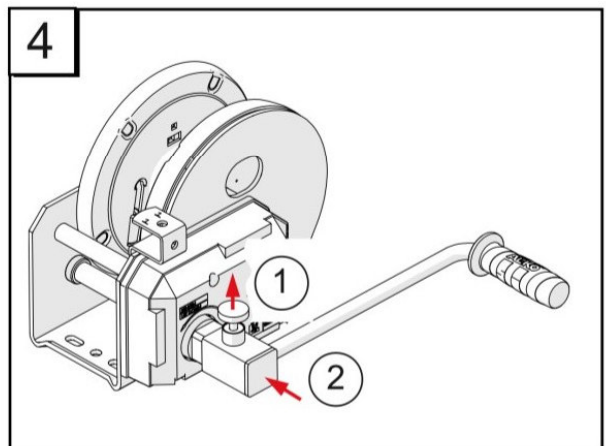
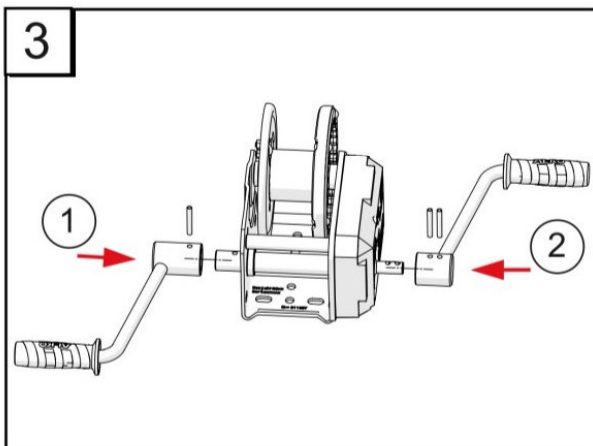
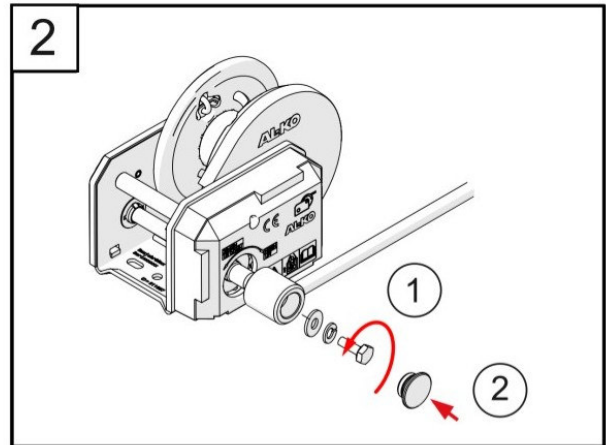
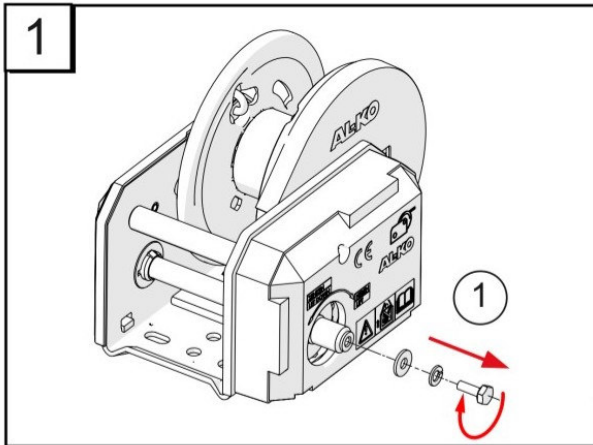
6.1 Additional Information for Manual/ Wire Rope Winch

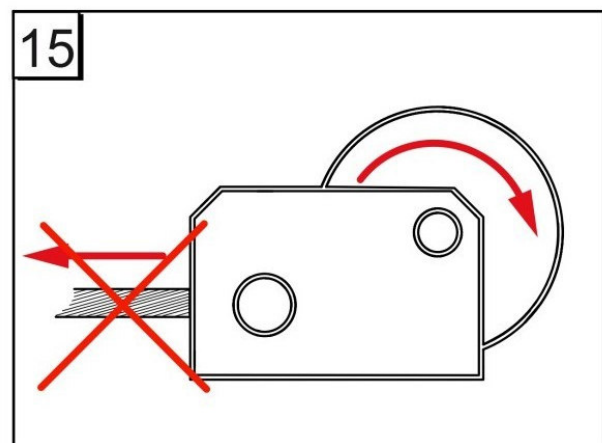
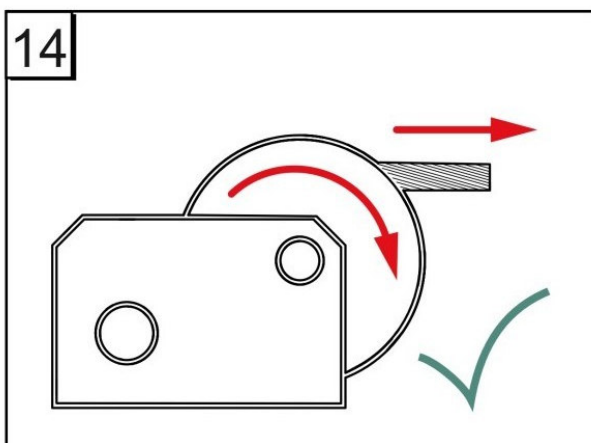
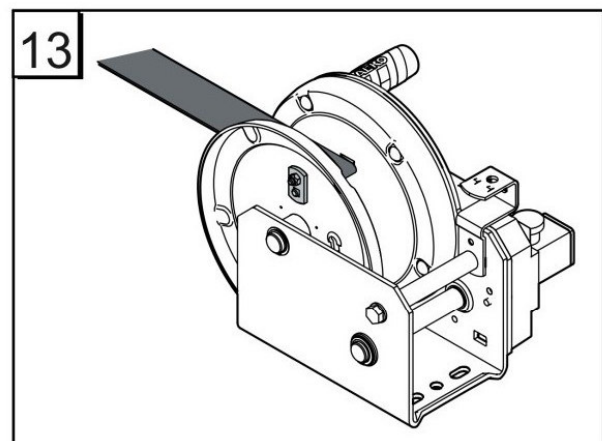
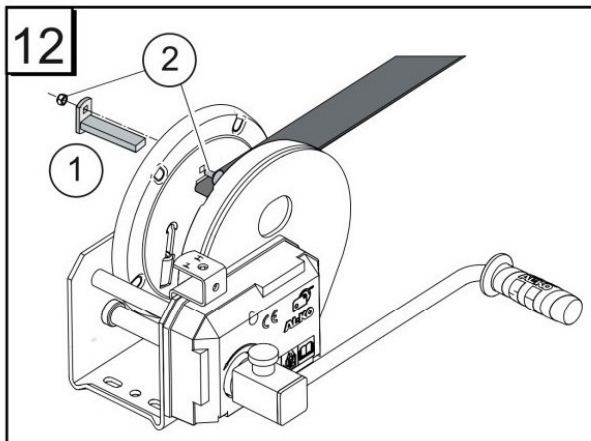
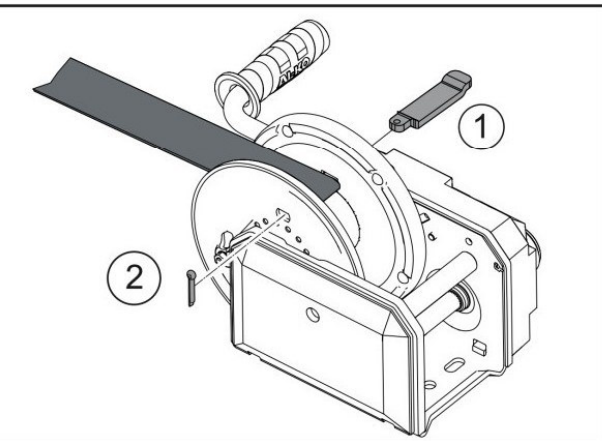
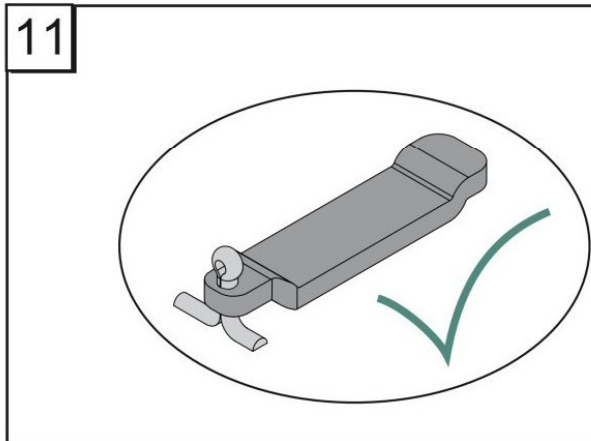
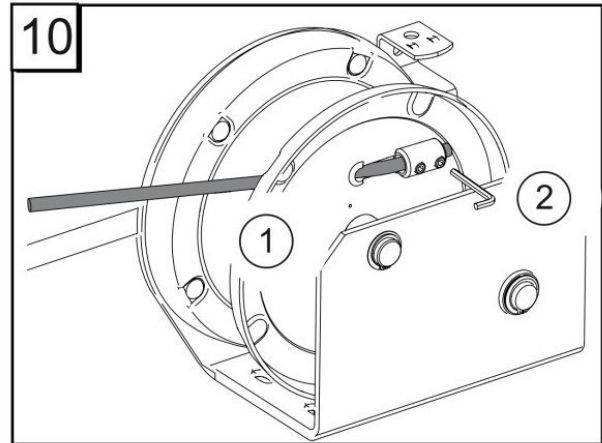
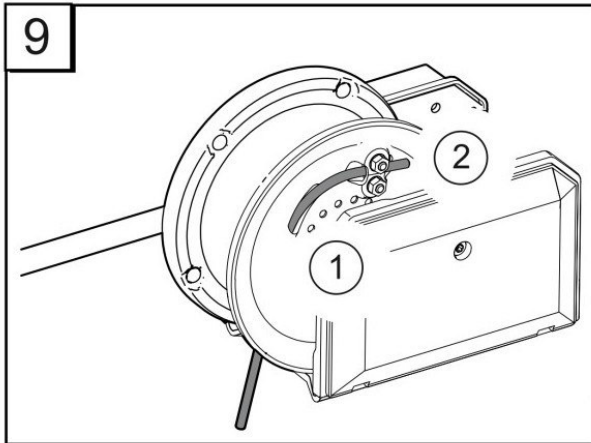


NOTE

Slack rope formation must be strictly avoided!







TRANSLATION OF THE ORIGINAL OPERATING INSTRUCTIONS

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ABOUT THIS DOCUMENTATION

- Read this documentation before starting up the machine. This is a precondition for safe working and flawless operation.
- Observe the safety warnings in this documentation and on the product.
- This documentation is a permanent integral part of the product described and must be passed on to the new owner if the product is sold.

Explanation of symbols



CAUTION!

Following these safety warnings carefully can prevent personal injury and/or material damage.



Special instructions for greater ease of understanding and improved handling.

PRODUCT DESCRIPTION

Winch types: Plus

- 351 Standard
- 501 Standard / with automatic rolling mechanism
- 901 Standard / with automatic rolling mechanism
- 651 D with double crank handle
- 1201 with automatic rolling mechanism

are intended solely for lifting, lowering and pulling the loads specified in the technical data.

Use of the winches is not permitted for:

- Stages and studios (BGV C1)
- Mobile personnel lifting equipment (BGR 159)
- Builder's hoists
- Motor operation
- Continuous operation

Use of the winches is not permitted in:

- potentially explosive environments
- corrosive environments

TECHNICAL DATA

type series plus	351	501	651D	901	1201
Max. load Traction (N)					
Lowest rope layer (F ₁)	3500 N	5000 N	6500 N	9000 N	11500 N
Top rope layer (F _{6/7/9})	1500 N	1700 N	3300 N	3300 N	5000 N
Gear reduction	2,5 : 1	3,75 : 1	8,75 : 1	8,75 : 1	10,5 : 1
Rope*	Ø4 mm	Ø5 mm	Ø6 / Ø7 mm	Ø7 mm	Ø7 mm
Minimum breaking force (F min)	10,5 kN	15 kN	19,5 kN	27 kN	34,5 kN
Drum capacity (m)	15 m	20 m	20 m	20 m	25 m
Strap (mm)	35-50x1,6	35-45x2,5	50x2,5	50x2,5	55x3,2
Minimum breaking force (F min)	24,5 kN	35 kN	45,5 kN	63 kN	80,5 kN
Drum capacity (m)	3 m	3,5 m	6 m	6 m	9 m

type series plus	351	501	651D	901	1201
Strap (not permitted for lifting)	42 x 1	42 x 1	52 x 1.4	52 x 1.4	55 x 1.6
Minimum breaking force (F_{min})	9 kN	12,5 kN	22,5 kN	22,5 kN	30 kN
Drum capacity (m)	4 m	7 m	10 m	10 m	12,5 m
Minimum load (kg)	25 kg	25 kg	25 kg	25 kg	25 kg
Permissible ambient temperature	- 20 °C to + 50 °C				

* in accordance with EN 12385-4 (rope class 6x19 / 6x19 M / 6x19W - / WRC)

SAFETY INSTRUCTIONS



CAUTION!

Danger due to brake being released!

Jolting can cause the load pressure brake to be released. Do not use the winch for securing loads! Do not remove the crank handle under load!

- Danger to life and limb! - Never stand under suspended loads!
- Risk of accident! - Lowering loads over prolonged periods may cause the braking system to become hot. Observe cooling breaks!
 - ⇒ Depending on the load, the maximum lowering duration is 2 - 5 minutes.
- Only use ropes whose karabiner hooks are attached with a pressed rope loop. End connections acc. to prEN 13411-3 with thimbles acc. to 13411-1.
 - ⇒ Unless specified otherwise in the aforementioned EN standards, the cable end connections must withstand a force of at least 85% of the minimum breaking force of the cable without breaking.
- Sharp edges! Risk of abrasion, crushing, cuts. Always wear protective gloves.
- If using a strap - observe the required breaking load.
 - ⇒ the strap end connections must withstand a force of at least 85% of the minimum breaking force of the strap without breaking.
- Do not allow the rope/strap to knot.
- Do not expose straps to acids or alkalis.
- Protect straps against moisture and permanent exposure to sunlight by means of a cover.
- Do not exceed the loads specified in the technical data.

- Always used non-twisting or low-twisting ropes for lifting a freely suspended load that could rotate during the lifting procedure!

ASSEMBLY

Assembling the crank handle



The crank handle must be able to make at least a ¼ turn to the left without moving the drive shaft or the rope drum.

Use a torque wrench for tightening. Tightening torque 20Nm.

Type 351, 501, 901 Standard

1. Remove the hexagon head screw, spring lock washer and washer from the drive shaft (1-1).
2. Hold the cable drum firmly and screw on the crank/crank nut fully.
3. Putting spring washer and plate on (2-1)
4. Screw in the screw anticlockwise until finger-tight (2-1).
5. Hold the crank/crank nut firmly and tighten the screw with a torque wrench.
6. Check if the crank/crank nut can be moved.
7. Push the cover on. (2-2)

Type 651D

1. Push crank handle onto the drive shaft. (3-1)
2. Insert the locking pin.
3. Push crank handle onto the drive shaft at 180° to crank handle. (3-2)
4. Insert the locking pins.

Type 501, 901, 1201 with automatic rolling mechanism

1. Pull out the safety button. (4-1)
2. Push the crank handle onto the drive shaft. (4-2)
 - ⇒ The safety button should automatically click into place.

Installing the rope



When under load, the rope must be wound at least two turns onto the drum. Mark the rope run-out with colouring.

Type 351

1. Feed the steel rope through the long hole of the drum from the inside. (7)
2. Insert the end of the rope into the clamp in a large loop and gently tighten hexagon nut. (8)
3. Pull the loop back up to the clamp and tighten the hexagon nut with a tightening torque of max. 10 Nm.
4. Wind the rope in two full turns.
 - ⇒ Do so by turning the crank handle in the "Lift" direction.
5. Mark the rope run-out in colour. (6-2)

Type 501, 651D, 901

1. Insert the steel cable from the inside to the outside through the slot in the cable drum. (9-1)
2. Insert the end of the cable through the embossed cable clamp.
 - ⇒ Let the end of the cable project by at least 10 mm. (9-2)
3. Tighten the nuts of the cable clamp firmly. (M5 = 6 Nm; M6 = 10 Nm)
4. Wind the rope in two full turns.
 - ⇒ Do so by turning the crank handle in the "Lift" direction.
5. Mark the rope run-out in colour. (6-2)

Type 1201

1. Feed the steel rope through the long hole of the drum from the inside. (10-1)
2. Insert the steel rope into the clamping piece on the rope drum.
3. Clamp the steel rope using the two Allen screws (10-2)
4. Wind the rope in two full turns.
 - ⇒ Do so by turning the crank handle in the "Lift" direction.
5. Mark the rope run-out in colour. (6-2)

Installing an optional strap

Our winches can optionally be used with a special loop strap instead of a rope.



CAUTION!

Risk of accident!

The breaking load of the strap must be at least 7 times the specified lifting capacity in the lowest rope layer.



The following must be observed during strap installation: – always turn the crank handle in the "LIFT" direction!

Installing the strap

Typ 351, 501, 901

1. Feed the AL-KO connector through the strap loop (11-1).
2. Secure with a split pin (11-2).
3. Wind the strap in two full turns and mark the strap run-out in colour.

Typ 1201

1. Feed the AL-KO connector through the strap loop. (12-1)
2. Secure this with a bolt and a hexagonal nut. (12-2, 13)
3. Wind the strap in two full turns and mark the strap run-out in colour.

Fastening the winch

Typ Plus	Fastening material	Torque
351	■ 3 hex. head screws M8 8.8 ■ 3 washers Ø8 DIN 125A	25 Nm
501 651D 901	■ 3 hex. head screws M10 8.8 ■ 3 washers Ø10 DIN 125A	49 Nm
1201	■ 4 hex. head screws M10 8.8 ■ 4 washers Ø10 DIN 125A	49 Nm

OPERATION



CAUTION!

Danger due to brake being released!

Jolting can cause the load pressure brake to be released.

Do not use the winch for securing loads!

- Danger to life and limb! Never stand under suspended loads!
- Risk of accident! Lowering loads over prolonged periods may cause the braking system to become hot. Observe cooling breaks!
⇒ *Depending on the load, the maximum lowering duration is 2 - 5 minutes.*
- Check the braking function of the winch; there must be an audible clicking sound when it is turned in the "LIFT" direction!
- Check whether the crank handle has locked into position (501A, 901A, 1201A)
- Check the rope/strap for damage and exchange if necessary.
- Do not route the rope/strap over sharp edges.
- To wind the rope/strap in without load, hold it slightly taut. In order for the brake to function correctly, a **minimum load of 25 kg** is required.
- When the rope/strap is under load, only wind it in so far that at least 1.5 x the rope diameter still hangs off the pulley.

Deflection angle



The deflection angle when winding the rope in or out must not exceed 4° (6-1).



CAUTION!

Risk of accidents!

Do not guide the cable out to the bottom left over the drive shaft!

⇒ *The brake function can fail if there is contact between the cable and the drive shaft. (14)*

Winch operation

Lifting/pulling a load

1. Turn the crank handle clockwise.

Holding a load

1. Release the crank handle.
⇒ *The load is held in its current position.*

Lowering a load

1. Turn the crank handle anticlockwise.
⇒ *The built-in brake stops the crank handle from flying back.*

Automatic rolling mechanism



CAUTION!

When under load, the crank handle must always be attached to the drive shaft!

1. Turn the crank handle anti-clockwise.
⇒ *without turning the rope drum.*
2. Pull out the safety button.
3. Remove the crank handle and place it on the holder designed for this purpose.
4. The rope / strap rolls out quickly.

MAINTENANCE AND CARE



CAUTION!

Sharp edges!

Risk of abrasion, crushing, cuts. Always wear protective gloves!



CAUTION!

Danger due to wear!

The winch user must check the cables / straps for wear before every use (DIN ISO 4309 / BGR 500). Immediately renew damaged cables / straps!

- Only authorised and proficient people are allowed to maintain and check the winch!
- The brake mechanism is treated by the manufacturer with a special grease (Wolfracoat 99113). Other oils and greases are not permissible!

Checking the winch

A check by a qualified person is always required:

- During initial commissioning
- After each reassembly
- Once a year
⇒ *According to the Ordinance on Industrial Safety and Health, qualified persons are persons who, due to industrial training, experience and recent work activities, possess the technical knowledge necessary to check the work equipment. Please comply with any additional national regulations.*

Maintenance intervals

- In the case of continuous work at up to 100% of the rated load: raise and lower after 100 m.
- In the case of continuous work at below 50% of the rated load: raise and lower after 200 m.

Perform the following work within these intervals:

- Monitoring work
- Lubricating

Inspection work

- Check that the crank handle turns smoothly.
- Check the locking function of the pawl.
- Raise and lower after 100 m, check the brake discs and brake pads for wear.
 - ⇒ *The brake pads must be at least 1.5 mm thick.*

Oil and lubrication points

The winch is already lubricated when delivered. Regrease the following points:

- Drum hub
- Sprocket / Gear teeth
- Bearing sleeve of the drive shaft
- Locking sleeve

Grease recommended by AL-KO:

- OMV Whiteplex multipurpose grease.
- Staburags NBU12K multipurpose grease.

REPAIRS

Repair work



CAUTION!

Repairs must only be carried out at AL-KO service centers or authorized specialist firms.

- If repairs are necessary, an extensive network of AL-KO Service Centres is available for our customers across Europe.
- Contact us directly to request a list of AL-KO Service Centres: **www.al-ko.com**

Spare parts are safety parts!

- For installation of spare parts in our products, we exclusively recommend original AL-KO parts or parts expressly approved by us for installation.
- In order to clearly identify spare parts, our service centres require the spare part identification number (ETI).

TROUBLESHOOTING

Fault	Cause	Solution
Load does not stop	Rope incorrectly wound in ⇒ <i>crank turned in wrong direction when lifting</i>	Fit rope/strap correctly
	Brake worn or defective	Check brake components and replace worn parts
	Brake pad damp or oily	Clean or change brake pads
Load pressure brake does not open	Brake disc mechanism or brake discs tight	Winch must be without a load! Release the brake by hitting the crank handle gently with a hand in the direction "Lower" ⇒ <i>If necessary, block the gears until the crank handle is loosened</i> ⇒ <i>Grease the crank handle thread</i>
Load pressure brake does not close	Crank handle not fully wound in during assembly and tightened with skt.- screw	See crank handle assembly and testing information
Lowering difficult with or without load	Crank handle thread is stiff	Grease the crank handle thread.



In the case of faults that are not listed in this table, or faults that you cannot rectify without assistance, please contact our customer service department.

EC DECLARATION OF CONFORMITY

We hereby declare that this product, in the form marketed by us, meets the requirements of the harmonised EU directives, the EU safety standards and the product-specific standards.

Product

AL-KO Winch

Type Plus

351, 501, 901, 651D, 1201

Manufacturer

ALOIS KOBER GMBH
Ichenhauser Str. 14
D-89359 Kötzt, Germany

EU directives

2006/42/EC

Harmonised standards

DIN EN 13157
EN ISO 12100

Authorised representative

ALOIS KOBER GmbH
Abteilungsleitung Techn. Entwicklung
Normung/Datenmanagement
Ichenhauser Str. 14
D-89359 Kötzt

Kötzt, 24.02.2014

Dr. Klaus Wilhelm,
Technical Leader

6.2 Information on the Rope

Damaging Influences

Synthetic fibre ropes are damaged by UV radiation. This damage depends on the material and exposure intensity and leads to brittle, weakened areas on the outer surface of the rope.

Friction under load or dynamic rope movement, such as running over sheaves, can generate significant heat. In such cases, the rope may be damaged due to thermal overload or may even melt.

Sharp edges or rough surfaces will damage the rope through abrasion.

Abrasive foreign particles in the rope (e.g. sand, salt, dust, etc.) lead to increased internal abrasion.

Contact with chemicals of any kind (solid, liquid, or gaseous) may, depending on the material, have a negative effect on the rope and its properties.

Maintenance/ Care

For cleaning the ropes, lukewarm water and pH-neutral soap are recommended.

If machine washing is required, the rope shall be neatly arranged and secured in a textile bag; it must not be washed loosely in a washing machine.

Do not use fabric softener.

Dry the rope in fresh air.

Do not use external heat sources, as this may damage the rope.

Inspection/ Monitoring

Ropes shall be inspected for their technical condition before each use. During operation, ropes must also be regularly checked for serviceability and damage.

The assessment and inspection of fibre ropes in service primarily include the following aspects:

Inhalte:

- Fibre breaks and abrasion
- Broken strands
- Crushing points and cuts
- Kinks and loop formation
- Technical condition of rope end terminations
- Damage caused by aggressive substances or intense UV exposure
- Burn marks and melt damage
- Signs of decay (natural fibre ropes only)

During visual inspection, the entire rope must always be examined.

Splice areas must also be visually inspected for any changes.

Heat damage to the rope can be identified by a fused or very smooth surface.

Discard Criteria

Ropes shall be taken out of service if any of the following conditions are present:

- Breakage of a strand
- Breakage or abrasion of more than 10% of the yarns of the rope cross-section
- Kink formation
- Melt damage
- Loosening of splices
- Sheath damage
- Cuts

If there is any doubt regarding the suitability of the rope, it shall be removed from service.

7 Commissioning

7.1 Pre-Commissioning Inspections

Inspection and testing of the aluminium multilift are required prior to commissioning to ensure that it has been fully and correctly assembled.

In addition, this verifies that the aluminium multilift is in proper working condition and ready for its intended use.

WARNING

Failure to carry out prior inspection may result in injuries during commissioning.

Inspect the aluminium gantry crane as follows:

- Visual inspection
- Functional test

7.2 Visual Inspection, Functional Test

Visual Inspection

The aluminium multilift must be inspected prior to each commissioning.

CAUTION

The aluminium multilift contains pinch points that may result in injury.

Carry out all inspections on the aluminium multilift with due care and caution.

1. Prior to loading the aluminium multilift, all locking bolts and screws must be inserted and, where required, secured with wing nuts.
2. The rope must be routed through the pulleys of the deflection head.
3. Inspect the rope for signs of wear and damage.
4. In case of defects, operation must be stopped. Any defects must be rectified by a qualified specialist.

Functional Test

The aluminium multilift must be inspected prior to each commissioning.

WARNING

Deformation or wear of individual components may result in load drop.

The aluminium multilift shall be immediately taken out of service.

Inspection shall be carried out by a qualified expert.

1. Verify the extent to which the individual components remain functional.
2. If in doubt, replace individual components.
3. Verify that all movable parts move freely.
4. Replace any parts that do not move freely.
5. If the aluminium multilift is no longer functional and irreparably damaged, take it out of service by appropriate labelling.
6. Dispose of the individual material components properly.

8 Operation

Once the aluminium multilift has been properly assembled and commissioned, it may be used for its intended purpose.

CAUTION

The aluminium multilift contains pinch points that may result in injury.
Carry out operation with due care and caution.

WARNING

Various hazardous situations may occur when using the aluminium multilift.

- The aluminium multilift is not equipped with a brake. The swivel castors are lockable only. Even on a slight gradient, the aluminium multilift may start moving unexpectedly.
- The aluminium multilift shall only be used on a level and stable surface.
- The aluminium multilift shall only be moved slowly over longer distances and when turning, and only with the load lowered.
- The manual/wire rope winch shall only be operated by hand using the crank and shall not be overloaded.
The minimum load of the load pressure brake shall be 25 kg.
Improper operation of the manual/wire rope winch may result in injury when lifting or lowering a load.
- The rope shall remain under tension at all times when lifting or lowering a load.
- The upper extension mast shall always be secured using the fastening screw, hex bolt, and wing nut.
- If cracks are detected in weld seams, a load-bearing component may fail, causing the load to drop and potentially resulting in serious injury.

DANGER

- The maximum load capacity must never be exceeded.
- Personnel must never stand or walk beneath a suspended load.
- Slack rope formation and potential swinging motions must be strictly avoided.

The aluminium multilift is designed for vertical lifting and lowering, as well as horizontal movement, of loads using a lifting fork or a boom arm on a level and stable surface.

9 Maintenance

The product is essentially maintenance-free.

9.1 Maintenance Plan

Maintenance Date	Action
Prior to commissioning	Visual and functional inspection by qualified personnel
Before each use after commissioning (provided no abnormal incidents have occurred)	Visual inspection by qualified personnel
Annually	Visual inspection, functional test, and load test by a qualified expert.

Concentrated acids or alkalis must not be used for cleaning, especially on non-metallic components. Cleaning agents containing solvents must also not be used.

9.2 Visual Inspection, Functional Test, and Load Test

Visual Inspection

See chapter "Commissioning" → Visual inspection

Functional Test

See chapter "Commissioning" → Functional test

Load testing in accordance with the relevant regulations

A load test shall be carried out on the product at least annually, and immediately in the event of any modifications or after maintenance or repair work.

 WARNING
The operator of the product is obligated to comply with the applicable statutory regulations. Arrange for a proper inspection to be carried out by a qualified expert.

- The operator of the product shall ensure that the product is inspected by a qualified expert at intervals not exceeding one year, and that any defects identified during inspection are rectified immediately.
- The provisions of DGUV Regulation 52 (BGV D6) – Accident Prevention Regulations for Cranes shall be observed.

In case of heavy use in suitable environments, also shorter intervals apply.

Manufacturer:	SCHILLING Kran- und Hebertechnik GmbH – http://www.schilling-fn.de Ernst-Zimmermann-Str. 9-11 88045 Friedrichshafen
Product:	Aluminium Multilift
Load Capacity:	
Item Number:	Sample Manual
Serial Number:	
Year of Manufacture:	

1.)	Inspection prior to delivery The visual and functional inspection of the product and its components has been carried out. The product has been designed, engineered, and manufactured in accordance with the state of the art.
Date: Dispatch date (see delivery note)	
Signature of the owner/manufacturer	

2.)	Commissioning inspection/ Start of operation The inspection has been carried out.
Date:	Signature of the qualified expert

3.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

4.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

5.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

6.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

7.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

8.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

9.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

10.)	Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.		
Date:		Signature of the qualified expert

11.) Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.	
Date:	Signature of the qualified expert

12.) Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.	
Date:	Signature of the qualified expert

13.) Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.	
Date:	Signature of the qualified expert

14.) Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.	
Date:	Signature of the qualified expert

15.) Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.	
Date:	Signature of the qualified expert

16) Due date of the next periodic inspection	Date:
Periodic inspection The inspection has been carried out.	
Date:	Signature of the qualified expert

Continue the list as necessary.

9.4 Checklist

Inspection template for duplication. File the completed copy together with the documentation.

Product:			Aluminium Multilift
Load Capacity:			
Item Number:			Sample Manual
Serial Number:			
Year of Manufacture:			
Manufacturer:			SCHILLING Kran- und Hebetchnik GmbH – http://www.schilling-fn.de Ernst-Zimmermann-Straße 9-11 – 88045 Friedrichshafen
Inspection notes for existing components. No claim of completeness.			
ok	not ok	not relevant	Inspection result ok, components in proper condition? The list may/must be extended accordingly.
			General condition in good order
			Function and condition of chassis, wheels, bearings, brakes?
			Load-bearing profiles, beams, struts free of cracks, without any relevant damage?
			Bolted and plug-in connections tight and in good condition? Holes not elongated or worn?
			Plastic components free of relevant cracks? No embrittlement?
			Chains, ropes, straps free of visible damage?
			Documentation available; labels and markings present and legible?
			Load test carried out? Rated load applied for 10 minutes, no permanent deformation?
If any defects are present, they must be rectified by the manufacturer or a qualified company using original spare parts. The defects have been properly rectified and the product is ready for use. Date and signature of the operations manager			
The product is free of defects and may be used until the next inspection. Date and signature of the inspecting qualified expert			

10 Disassembly and Disposal

As the manufacturer, we are legally required to inform you not to dispose of the product as unsorted waste. It must be disposed of separately via collection or return points for industrial and commercial waste.

Therefore, the product must be disassembled into its individual components.

10.1 Disassembly

CAUTION

Disassembling the product on unstable surfaces or using unsuitable tools may result in injury.

1. The assembled product must be disassembled in the reverse order of assembly, as described in this documentation.
2. The individual assemblies of the product must then be disassembled using suitable tools.

10.2 Disposal



INFORMATION FOR DISPOSAL

If the product is no longer functional or cannot be repaired, it must be disposed of in accordance with applicable regulations.

The product consists of several different material components, which must be disposed of separately:

- Dispose of aluminium components as scrap aluminium.
- Dispose of metal components as scrap metal.
- Dispose of plastic components as scrap plastic.
- Dispose of electrical components as electrical scrap (for example, when using an electric chain hoist).

Disposal of Packaging Material



INFORMATION FOR DISPOSAL

Packaging material must be properly disposed of or recycled.

11 Service

11.1 Contact

For service matters or all other enquiries, contact your supplier.

11.2 Spare Parts Ordering or Reordering Process



INFO

Use the overview and table in Chapter “Overview of Individual Components” to correctly identify the required component, and provide this information to your supplier.

1. Determine the serial number of your product. The serial number can be found in this user information in Chapter “Technical Data” and is also engraved on the product.
2. Determine the year of manufacture of the product. The year of manufacture can be found in this user information in Chapter “Technical Data” and is also engraved on the product.
3. Refer to the overview in Chapter “Overview of Individual Components” and mark the relevant component or assembly
4. Contact your supplier directly, providing the collected information and any additional details.

