

Supplement to the operating instructions

ERGOKET Manipulator



MADE IN GERMANY BY LIFTKET

The electric chain hoist may only be operated by persons who have read and understood the entire operating instructions.

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1 General information

This supplement to the operating instructions for electric chain hoists with the ERGOKET manipulator is valid only in conjunction with the main operating instructions. It describes only the specific modifications for the ERGOKET manipulator.

The specific points mentioned in this supplement take precedence over the main operating instructions.

NOTICE

Annual maintenance

In order to ensure the safe operation of the electric chain hoists, annual maintenance is required. All maintenance work may only be carried out by competent persons. Defects must be communicated to the operator immediately in writing. The operator shall arrange for the correction of these deficiencies.

Follow the maintenance intervals specified in this document. Perform the maintenance work according to the instructions in the main operating instructions and this supplement.

For more information, please refer to the main operating instructions included in the documentation package.

2 Safety

WARNING

Danger of injury

Transporting persons is prohibited!

WARNING

Risk of crushing and shearing injuries

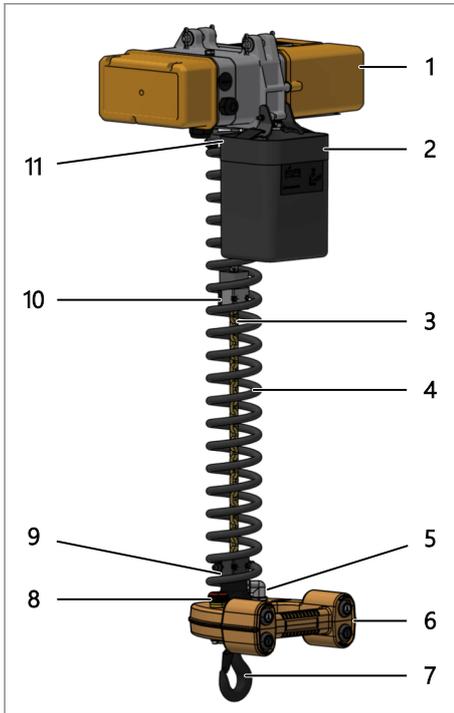
Touching moving parts constitutes a risk of crushing and shearing injuries.

- Do not touch the chain during operation.
- Do not touch the spiral cable during operation.

Control unit versions

3 Technical overview

3.1 Structure of the electric chain hoist with manipulator



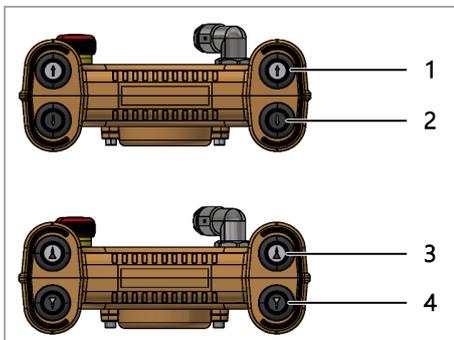
- 1 Lifting device
- 2 Chain box
- 3 Load chain
- 4 Spiral cable
- 5 Angled screw connection
- 6 Control unit
- 7 Hook tackle
- 8 EMERGENCY STOP
- 9 Lower bracket
- 10 Additional lift limiter
- 11 Upper bracket

The electric chain hoist consists of the lifting device and the associated manipulator. The manipulator comprises the spiral cable, the control unit and the upper and lower brackets. The upper and lower brackets relieve the strain on and secure the spiral cable.

! NOTICE
The lifting height is limited to a maximum of 3 m.

Fig. 1: Structure

3.2 Control unit versions



- 1 1-stage lifting
- 2 1-stage lowering
- 3 2-stage lifting
- 4 2-stage lowering

The manipulator is supplied in two versions. These must correspond to the version of the electric chain hoist:

- 1-stage → Electric chain hoist with 1 lifting speed
- 2-stage → Electric chain hoist with 2 lifting speeds

Fig. 2: Versions

3.3 Main dimensions

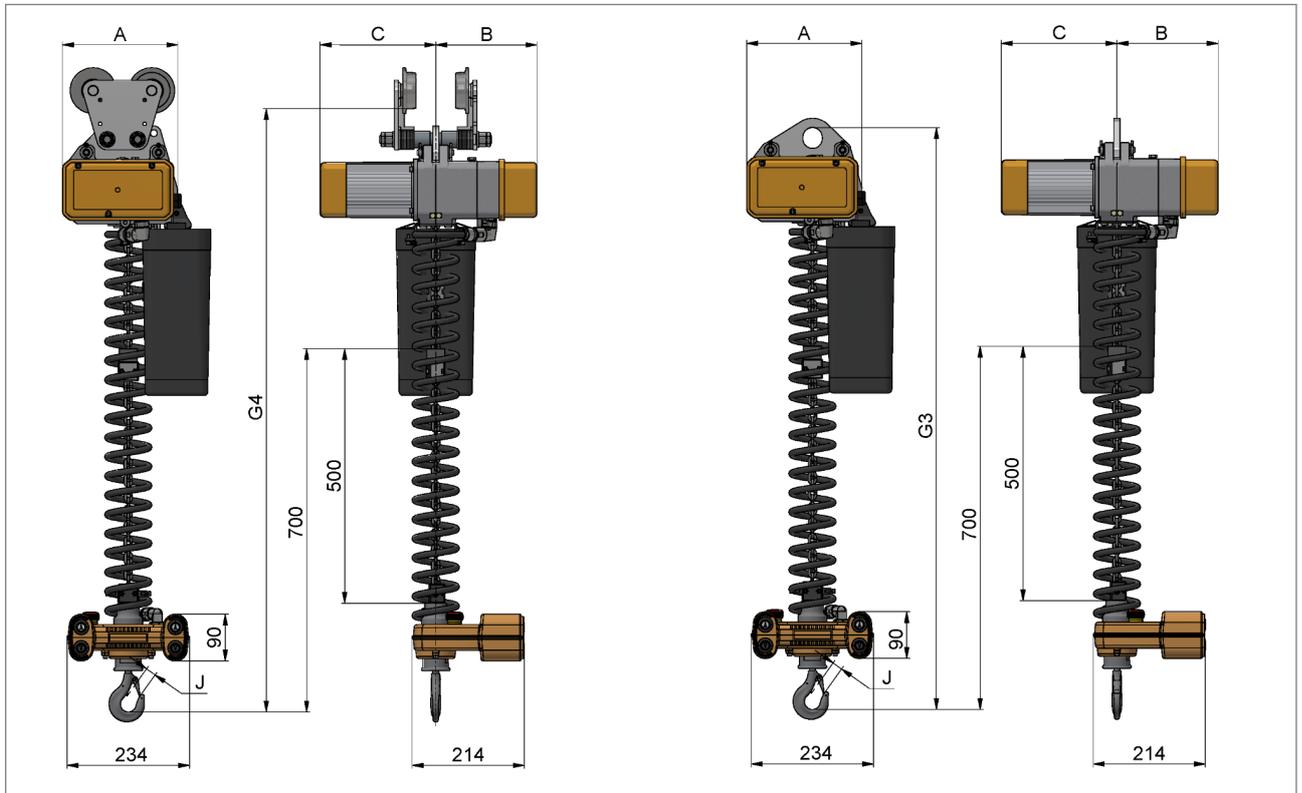


Fig. 3: Main dimensions

Tab. 1: Main dimensions

Type	Load chain	Chain weight	Motor	Weight ¹⁾	Dimensions							Hook size	
					A	B ²⁾	C	G3 _{min.}	G4 _{min.}	ØN	J		
		[mm]	[kg/m]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	DIN 15401
030/...	1/1 5.2x15	0.59	63G2 63G4 63K2	18	212	192	220	880	920	37	20	012	
031/...	1/1 5.2x15	0.59	63GV8-2	18	212	192	220	880	920	37	20	012	

¹⁾ Lifting height = 3 m; single-hole suspension lug

²⁾ Dimension B is larger in the version with a gear limit switch.

4 Assembly instructions

4.1 Assembling the manipulator

The following are prerequisites for assembling the manipulator on the electric chain hoist:

- Electric chain hoist with 5.2x15 mm chain with 1/1 reeving.
- The planned lifting height must not exceed 3 m.
- The load capacity of the electric chain hoist corresponds to the information on the load capacity label and the hook tackle.
- The load chain hangs at least 0.7 m out of the housing of the electric chain hoist on the load side.
- The hook tackle has been removed.
- The electric chain hoist is equipped with the EASY CONNECT Plug & Play system.

Assembling the manipulator

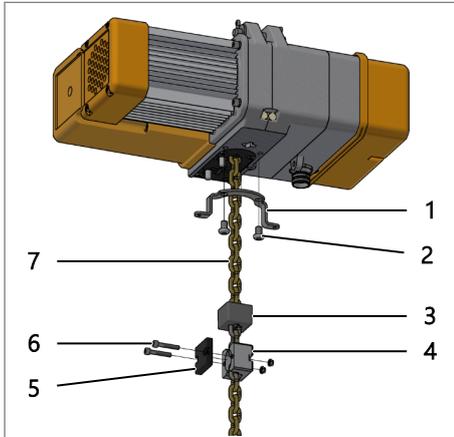


Fig. 4: Mounting the upper bracket

- The manipulator, the upper and lower brackets and an additional lift limiter are required.
- The electric chain hoist is safely accessible for assembly purposes.

- 1 Retaining plate of the upper bracket
- 2 Screws
- 3 Rubber buffer
- 4 Lift limiter bowl
- 5 Lift limiter cover
- 6 Connectors
- 7 Load chain

1. → Mount the retaining plate of the upper bracket on the electric chain hoist.
2. → Thread the rubber buffer of the additional lift limiter onto the load chain.
3. → Fit an additional lift limiter to the load chain at a distance of 0.5 m from the chain end.
4. → Guide the load chain through the spiral cable.
5. → Connect the angled plug to the EASY CONNECT socket of the electric chain hoist.

! NOTICE

Damage to the EASY CONNECT connection

- The angled plug must be inserted with its marking exactly on the marking of the EASY CONNECT socket of the electric chain hoist.
- The angled plug can then be turned to the required position and tightened.

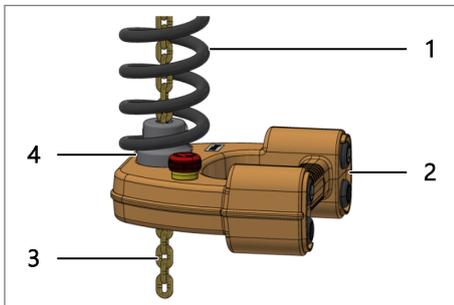


Fig. 5: Mounting the rubber buffer

- 1 Spiral cable
- 2 Control unit
- 3 Load chain
- 4 Rubber buffer for the hook tackle

6. → Press the rubber buffer into the opening of the control unit.
7. → Thread the end of the load chain through the rubber buffer and the control unit.

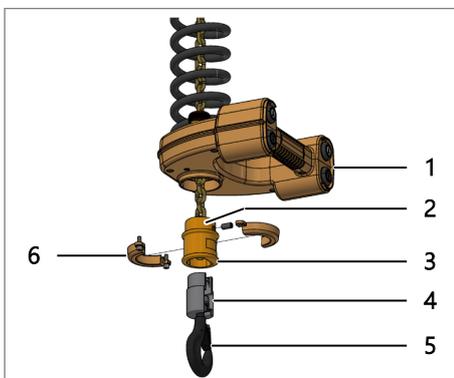


Fig. 6: Assembling the hook tackle

- 1 Control unit
- 2 Load chain
- 3 Securing sleeve
- 4 Hook bowl
- 5 Load hook
- 6 Hook flange

8. → Thread the securing sleeve onto the load chain.
9. → Fit the hook bowl with inserted load hook to the load chain.
10. → Push the securing sleeve onto the hook bowl.
11. → Secure the securing sleeve with a threaded pin.
12. → Detach the hook flange from the control unit.
13. → Secure the upper ring of the securing sleeve of the hook tackle to the hook flange on the control unit. Tighten the screws of the hook block with 0.5–1 Nm.

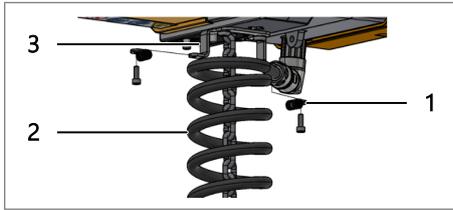


Fig. 7: Fitting the pipe clips

- 1 Pipe clip
- 2 Spiral cable
- 3 Upper bracket

14. ➤ Secure the spiral cable to the upper bracket using the pipe clips.

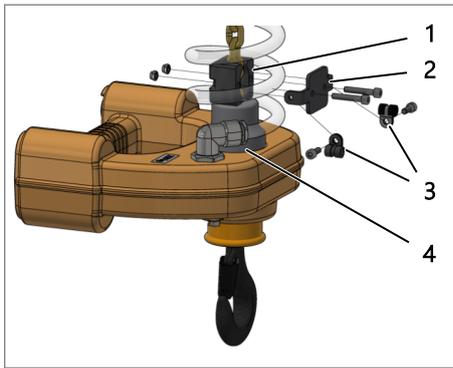


Fig. 8: Mounting the lower bracket

- 1 Hook bowl
- 2 Lower bracket
- 3 Pipe clips
- 4 Rubber buffer for the hook tackle

15. ➤ Fit the lower bracket to the load chain above the control unit. Tighten the screws with 4 Nm.

16. ➤ Secure the spiral cable to the lower bracket using the pipe clips.

17. ➤ Attach the load capacity label to the control unit.

4.2 Load capacity labelling

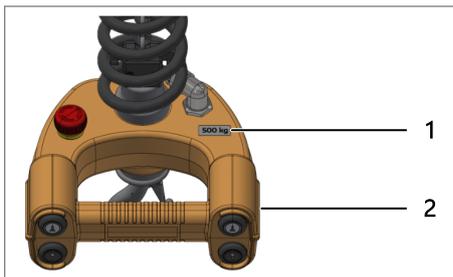


Fig. 9: Load capacity label

- 1 Load capacity label
- 2 Control unit

The load capacity label must be attached to the control unit such that it is clearly visible.

The load capacity must correspond to the information on the additional load capacity label and the hook tackle.

4.3 Mounting the spiral cable on the control unit

Removal of damaged spiral cable

- 1.** ➤ Disconnect the EASY CONNECT angled plug from the electric chain hoist.
- 2.** ➤ Remove and retain the pipe clips of the upper bracket for the spiral cable.
- 3.** ➤ Remove and retain the lower bracket including the lift limiter.
- 4.** ➤ Remove and retain the hook flange.
- 5.** ➤ Remove the hook tackle.
- 6.** ➤ Remove the rubber seals of the control unit.
- 7.** ➤ Remove the control unit screws and open the control unit.
- 8.** ➤ Remove the strain relief of the old control cable.
- 9.** ➤ Disconnect the wires.
- 10.** ➤ Loosen the angled screw connection.
- 11.** ➤ Pull the old control cable out of the angled screw connection.

Installing a new spiral cable

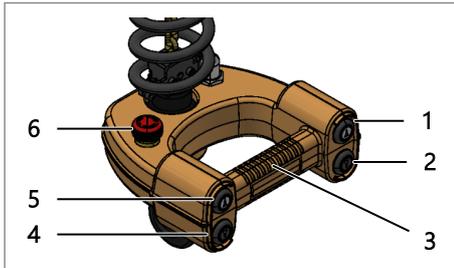
- 12.** ➤ Thread the new spiral cable through the angled screw connection and connect it according to the wiring diagram.
- 13.** ➤ Mount the strain relief.

Maintenance intervals

- 14. ➤ Tighten the angled screw connection by hand.
- 15. ➤ Close the control unit and tighten the screws with a tightening torque of 0.5–1 Nm.
- 16. ➤ Fit the hook tackle and upper and lower brackets (see ➔ *Chapter 4.1 'Assembling the manipulator' on page 7*).

5 Operating instructions

5.1 Operation



- 1 Right-hand Lift button
- 2 Right-hand Lower button
- 3 Handle
- 4 Left-hand Lower button
- 5 Left-hand Lift button
- 6 EMERGENCY STOP

Fig. 10: Operation

Operating element	Type of operation	Function
Red mushroom button = EMERGENCY STOP	Press/hit the button	EMERGENCY STOP
	Turn the button to the right	Unlock
Direction buttons, one speed	Press button	Movement in the selected direction
Direction buttons, two speeds	Stage 1 button pressed	Movement in the selected direction at slow speed
	Stage 2 button pressed	Movement in the selected direction at fast speed
Handle	Hold the handle firmly	Handle for guiding the load

To operate the manipulator, the lifting and lowering buttons on one side can be used so that the manipulator can be operated comfortably by both right-handed and left-handed people.

5.2 Locking the buttons

The manipulator is equipped with an electronic locking mechanism. This prevents malfunctions caused by pressing several buttons at the same time.

If several buttons are pressed, the function of the first button selected is always executed.

6 Maintenance

6.1 Maintenance intervals

i The daily functional inspection and the annual inspections are carried out in the same way as the inspections of the control pendant for the electric chain hoist.

Interval	Maintenance work
Before every use	Visual check <ul style="list-style-type: none"> ■ Check the spiral cable for crushing, kinks and abrasion marks (inside) <ul style="list-style-type: none"> ⇒ If the protective tube is damaged, it is recommended to replace the spiral cable ⇒ If the control cable is damaged, replace the spiral cable ■ Control unit for damage/breakage

6.2 Maintenance work



The maintenance work applies only to the manipulator. The maintenance tasks for the electric chain hoist are explained in the main operating instructions.

Spiral cable

Visual inspection

- Check that the spiral cable is firmly seated in the angled screw connection or angled plug.
- Check the screw connections and position of the upper and lower brackets.
- Check the spiral tube for damage; in particular, check the inner area for damage by the lift limiter.
⇒ If the control cable is damaged, the spiral cable must be replaced.

Control unit

Visual inspection

- Check the surface of the control unit for damage such as cracks or chips.
- Check the screw connections of the control unit. Check that all the rubber seals are present.
⇒ Replace damaged control unit.