

User Manual

C6e Gen 2 Compact crane



Original instructions

Serial no.:

Delivery date:

Reference: U.C6e Gen 2.EN

Version: 1.0

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PREFACE

Thank you for buying the Hoeflon C6e Gen 2 Compact crane. We hope that you enjoy using it and that you will enjoy using it for many years to come.

This user manual contains the operating instructions for the Hoeflon C6e Gen 2 Compact crane. In this user manual we will refer to it as the compact crane.

Read this user manual carefully to familiarize yourself with the correct operation and maintenance of the compact crane. The figures in this document are for illustration purposes only and can be different from the compact crane in your situation.

Hoeflon International B.V. recommends that you keep the original copy of this user manual, including all the annexes, in a safe, central place. Keep a copy of this user manual near the machine at the workplace.

General terms & conditions

In all cases, Hoeflon International B.V. delivers the machine exclusively according to the General Terms and Conditions applicable at the time of purchase. These General Terms and Conditions can be found on the website www.hoeflon.com.

Although Hoeflon International B.V. has made every reasonable effort to make sure that this user manual is as accurate and helpful as possible, Hoeflon International B.V. does not provide any guarantees with regard to the accuracy or completeness of the information provided herein.

Hoeflon International B.V. is committed to keeping the information in this user manual complete, accurate and up to date. Hoeflon International B.V. accepts no liability for the consequences of errors, except in the case of willful intent or deliberate recklessness on the part of Hoeflon International B.V..

Hoeflon International B.V. continuously develops and improves its products, we reserve the right to make changes to the technical design at any time without prior notice.

For technical support, please speak to your Hoeflon dealer.

Warranty and liability

The Hoeflon C6e Gen 2 Compact crane conforms to the applicable basic safety and health requirements of the EU directives. It has been carefully tested for trouble-free use at the factory. If the compact crane does have problems stop using the compact crane and speak to your Hoeflon dealer immediately.

Use the compact crane only for lifting loads as described in this user manual. Do not use the compact crane in any other way.

Do not use the compact crane if:

- it is damaged,
- there is an error,
- if there is a warning.

Repair the compact crane first.

Hoeflon International B.V. is not liable for any damage or injury resulting from:

- not obeying the instructions in this user manual,
- exceeding the factory specifications,
- not obeying the legal requirements.

Do not:

- modify the compact crane,
- repair the compact crane yourself,
- use unauthorized replacement parts.

Make sure that you maintain the compact crane correctly as described in this user manual.

Target audience

This user manual is intended for everyone who works with or on the compact crane.

Only use the compact crane if you are sufficiently trained and fully know how to use the compact crane. Obey your local laws on training and equipment competence. Hoeflon International B.V. can give training on how to use the compact crane.

Always stay safe in familiar and unfamiliar situations.

Warning icons

The instructions, recommendations and warnings in this user manual are accompanied by the following terms and pictograms. Read these instructions carefully.



Danger

Identifies a very dangerous situation which, if not prevented, can result in death or very bad injury.



Warning

Identifies a dangerous situation where there is a risk of bad injury.



Caution

Identifies a situation where equipment or property can be damaged; or if there is a risk of injury.



Note

Identifies important information to help you understand or adjust the equipment.

Structure of the user manual

Preface describes the purpose of the manual, general terms and conditions, warranty and liability, target audience and notes for the reader.

Introduction includes an introduction to the compact crane.

Safety lists all the points the user needs to know to work safely with the compact crane.

Technical data gives the dimensions and specifications of the compact crane.

Description describes the main components of the compact crane and the operation of its various components.

Installation gives information on attaching each component.

Operation gives operating instructions for the intended use of the compact crane.

Maintenance gives information on the necessary maintenance.

Troubleshooting lists possible faults and how to solve them.

Transport and storage gives recommendations for transporting and putting the compact crane in storage.

Disposal gives instructions for the disposal of the compact crane.

1.

Introduction

1.1 Intended use



Use the compact crane to lift loads such as heavy building materials and glass sheets in a limited space. The compact crane is powered by an electric motor and controlled with a remote control. The electric drive makes the compact crane suitable for working indoors.

The compact crane is designed so that charging and working can be done at the same time by connecting the compact crane to mains power at the workplace.

Only use the compact crane as intended and as described in this manual.

1.2 EC Declaration

Hoeflon International B.V. declares that the compact crane conforms with the applicable European Directives. The EC Declaration of Conformity is part of the documentation which is supplied with the compact crane.

1.3 Type plate

A type plate containing data for the compact crane is attached to the left side of the column. This type plate may not be removed. The CE mark indicates that the compact crane conforms to the applicable standards for the European Economic Area.

HOEFLON®		CE 2006/42 CE	
Zwolleweg 2	tel: +31(0)342 400288		
3771 NR Barneveld	info@hoeflon.com		
THE NETHERLANDS	www.hoeflon.com		
Type	<input type="text"/>	Year of Registration	<input type="text"/>
Model	<input type="text"/>		
Serial No.	<input type="text"/>	Year of Manufacture	<input type="text"/>
Weight	<input type="text"/> KG	Max. Capacity	<input type="text"/> KG

Type	The type of compact crane
Model	The brand of the compact crane
Serial no.	The serial number of the compact crane
Year	The year the compact crane was built
Weight	The weight of the compact crane
Max. capacity	Maximum working load

2.

Safety

2.1 Introduction

Make sure that you have read the manual of the compact crane and that you fully understand its contents.

Make sure that you understand and obey all applicable legal requirements on using the compact crane before you start work.

When using the compact crane:

- Obey all warnings and regulations.
- Obey all applicable national regulations about:
 - working with the compact crane,
 - working conditions,
 - work safety.

Make sure that all lifting equipment is correctly rated, approved and not damaged.



WARNING

Stop work immediately if you find any hydraulic leaks. Repair a leak immediately.

Hydraulic oil under pressure can penetrate the skin.

Obey the general safety precautions in this chapter when using the compact crane.

Always be aware of the weight of the components and the loads.

Only use the correct tools.

Keep the compact crane clean.

2.2 Notes on the safety features



Warning

Do not remove, bypass or disable safety equipment.

2.2.1 General

If a sensor does not give an indication, speak to your Hoeflon dealer or to Hoeflon dealer immediately.

Do not:

- continue working.
- remove, bypass or disable safety equipment.
- remove, bypass or disable a sensor.
- change the pressure settings.
- change the motor speed.

Changing safety equipment, sensors, settings or speeds can lead to dangerous situations and damage to the crane. Any such changes will void the warranty immediately.

2.2.2 110% button

Use the 110% button only to return the crane to a safe situation (see 5.2.3 110% button)

Do not:

- use the 110% button to increase the crane's outreach.
- use the 110% button to continue lifting.

2.3 Personnel



Note

Make sure that all personnel that works with the compact crane has the necessary licenses and work permits as specified by your local laws on training and equipment competence.



Caution

Always use approved Personal Protective Equipment (PPE).

- Hardhat
- Safety shoes
- Gloves
- Safety glasses

All operating personnel must:

- be fit to do the task.
- stay out of the operating radius of the compact crane.
- fully know the content of the user manual of the compact crane.
- be familiar with all the functions and attachments associated with the equipment.
- be at least 18 years of age.

Do not:

- be under the influence of narcotics or alcohol.
- go under the load.
- go near or climb on the compact crane when it is being used or when it is moving.
- go near or climb on the load when it is being lifted or when it is moving.
- use the compact crane to transport or lift people.

2.4 Work environment

Make sure that the environmental and operational conditions are safe and within limits before using the compact crane.

Put barriers and safety warnings around the perimeter of the work area. Do not let unauthorized people in the work area.

Use extra light in dark areas.

Do not smoke or make fire in the work area.

Use communication equipment and a spotter if you cannot fully view the entire work area.

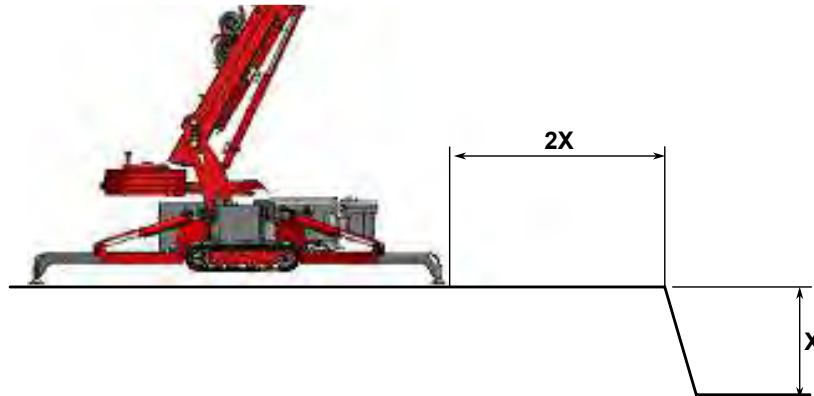
Obey the height restriction in covered areas.

Do not use the compact crane:

- if it is not safe,
- near high voltage cables,
- during lightning storms,
- in an explosive environment.

Do not put the compact crane on, in or adjacent to holes.

2.5 During setup



When the compact crane is near a ditch or slope, make sure that the distance from to the edge is at least twice the depth of the ditch.

Look at the active outrigger during extension or retraction.

Stay away from the active outrigger during extension or retraction.

Make sure that the ground is stable and has sufficient load bearing capacity.

Make sure that the counterweight cannot touch the outriggers during slewing.

2.6 While working



Caution

If you use the crane incorrectly, incorrect and high forces can permanently damage or shorten the life of the crane.



Warning

Stop work and move the compact crane into a safe position if a safety feature stops working or becomes damaged.

Fully prepare the task.

Continuously monitor the work area.

Continuously monitor the tip of the boom or the tip of the jib and the load. Make sure that the boom, the jib and the load do not hit anything.

Do not let unauthorized people in the work area.

**Caution**

Do not use the compact crane to:

- drag loads,
- winch loads at an angle,
- pull loads free (such as pulling out poles),
- push loads.

Prevent dangerous situations between:

- the compact crane,
- the operator,
- other people,
- the load,
- the surroundings,
- the ground.

Do not:

- enter the work area during operation of the compact crane,
- let anybody enter the work area during operation of the compact crane,
- move a load over people,
- touch rotating parts,
- touch moving parts.
- put anything on the compact crane.

The lifting point on top of the jib is only intended for lifting the jib when it is removed from the crane. Do not use this lifting point for lifting a load or for securing the crane.

2.7 During lifting

**Caution**

The boom is flexible and bends when lifting the load. The boom will spring back when the load is put down.

Always:

- Use low gear and low speed when handling a load. The LED must be OFF.
- Lift a load over its center of gravity.
- Attach the load correctly.



Do not:

- Use the crane with a damaged or weakened hook, cable or other lifting equipment.
- Lift heavier loads than the maximum permitted workload according to the load chart.

Only move loads that:

- can move freely from the surface,
- are directly beneath the hook,
- are stable.

Make sure that there are no loose objects on:

- the crane,
- the load.

2.8 Working with long loads

Be careful when you move a long load.



Caution

The ends of a long load can move very fast.

The ends of a long load can still move even though the crane has stopped moving.

The ends can hit something and can cause dangerous situations.

2.9 Moving the crane

Before moving the crane:

- Put the tracks in the "extended" position (if possible).
 - Be careful if you move the crane while the tracks are retracted.
- Retract and lower the boom.
- Retract the counterweight.

Do not:

- lock a lever on the remote control,
- drive the crane if it is connected to the power grid,
- drive through water if the depth is more than 10 cm,
- drive the compact crane on public roads.

Make sure that you have a good view of the surrounding area.

2.10 Electrical

Use a suitable connection to the mains supply. An unsuitable connection may cause a fuse to fail.

When the crane is connected to the mains supply, do not use the crane in:

- the rain,
- snow,
- wet grass,
- or on a wet floor with puddles.

Charge the batteries at the end of each day to keep them balanced and in good condition:

- Use an earthed mains supply for charging.
- Do not push the emergency stop buttons.

Do not:

- do any work on the electrical system,
- open or disassemble the battery / batteries or charger.

2.11 After work

- Put the crane in transport position, (see 11.1.1 Put the compact crane in the transport position).
- Remove the key before that you leave the compact crane unattended.
- Remove all safety barriers and warning signs.

2.12 Emergency stop

The emergency stop button is:

- At the rear of the crane.
- On the remote control.



Caution

ONLY use in an emergency.

Do not use this button for ANY other reason.

Do not use the emergency stop to normally stop the crane.



Caution

Make sure that it is safe to start the compact crane.

2.13 Rated Capacity Limiter (RCL)

The RCL protects the compact crane from overloading.

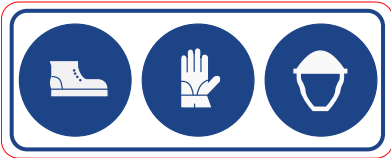


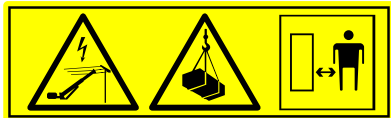
If the compact crane enters the range in which it is no longer allowed to lift the load, it will automatically stop increasing the outreach. The red lamp in the stack light comes ON and the acoustic signal operates.

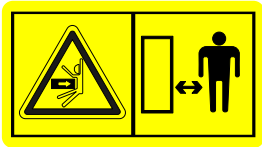
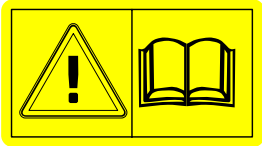

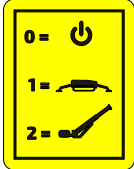




At this time the compact crane can only move the load so that it goes back into the safe range. The outreach is reduced.

When the RCL is active.	
You can:	You cannot
<ul style="list-style-type: none"> • Lower the boom • Retract the boom • Lower the jib • Retract the jib • Unwind the lifting cable 	<ul style="list-style-type: none"> • Raise the boom, • Extend the boom, • Raise the jib, • Extend the jib, • Wind the lifting cable,

2.14 Pictograms

The pictograms used are shown below. Do not remove these pictograms. Replace missing or damaged pictograms immediately.

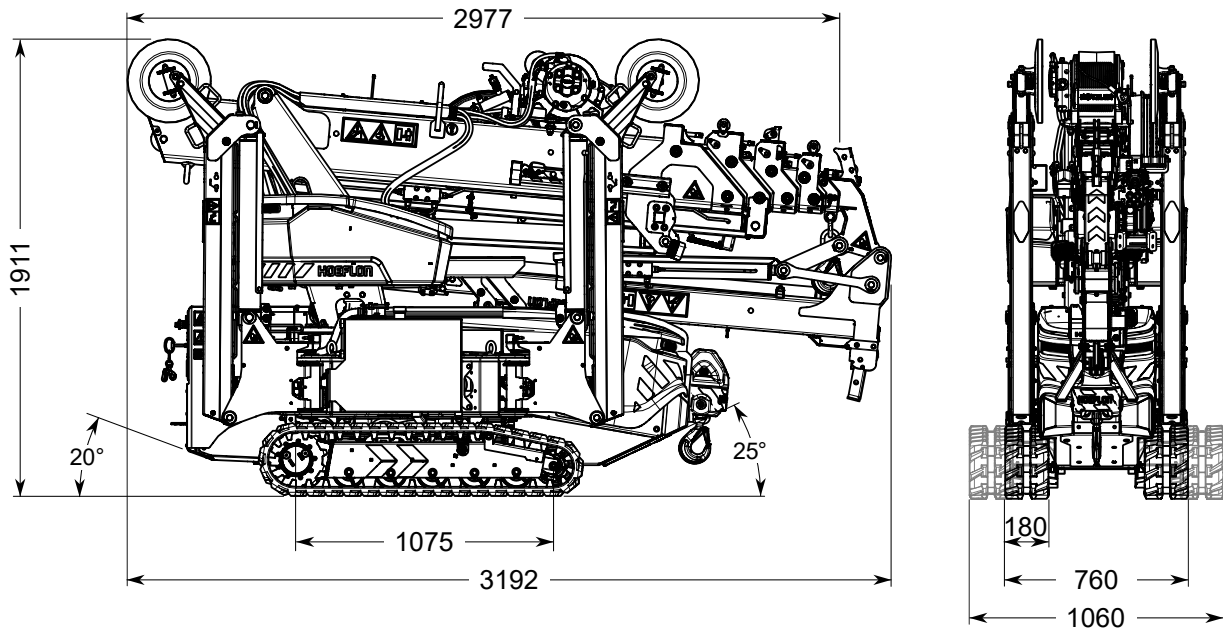
Pictogram	Meaning	Location
	<ul style="list-style-type: none"> • Foot protection is mandatory • Hand protection is mandatory • Head protection is mandatory 	On the two sides of the electrical cabinet.
	Lifting point for lifting the crane and the jib	On the left and right sides of the boom and the jib.
	Lashing point	On the four corners of the undercarriage frame.
	<ul style="list-style-type: none"> • Stay away from high-voltage cables • Warning for hanging loads • Stay away from the crane 	On the left and right sides of the boom and the jib.

Pictogram	Meaning	Location
	Danger of crushing when operating the counterweight Stay away from the counterweight	On the two sides of the electrical cabinet.
	Read the manual before operating the crane	On the two sides of the electrical cabinet.
	Label that shows when annual inspection is due (Netherlands only)	On the door of the electrical cabinet.
	Shows the function of the main switch: 0 = Crane switched off 1 = Undercarriage (driving crane or setting outriggers) 2 = Superstructure (lifting with crane)	On the door of the electrical cabinet.
	Risk of entrapment when setting the outriggers	On the outriggers.
	Warning for entrapment hazard	On the crane at pivot points and on the outriggers at the cylinders.
	Warning for electrical voltage	On the door of the electrical cabinet.
	Warning for non-ionising radiation	On the electrical cabinet on the boom near the receiver.

3.

Technical data

3.1 Dimensions



3.2 Center of gravity



Note

The center of gravity is specified with a retracted counterweight.

- Below the lifting hook at the top of the boom (boom fully lowered).
- 860 mm from the bottom of the crawler track.

3.3 Specifications

3.3.1 Basic data

Machine brand	Hoeflon
Max. working load and lifting point of crane	See the load charts in the appendix
Slewing range	Infinite rotation

3.3.2 Crane and component weights

Total - including jib and counterweight	2850 kg
Counterweight	500 kg
Winch head	13 kg
Hook block	36 kg
Searcher hook	6 kg

3.3.3 Maximum loads

See the load charts for the maximum loads (see Appendix)

3.3.4 Maximum lean angles

Maximum angle from horizontal during lifting	3°
--	----

3.3.5 Jib

Weight	160 kg
Maximum capacity	1050 kg
Maximum lifting range with the jib	15.5 m

3.3.6 Winch

Maximum winch load option 1	1000 kg with 40 m cable
Maximum winch load option 2	800 kg with 80 m cable
Maximum load when reeving	1x reeving 2000 kg 2x reeving 2350 kg

3.3.7 Environmental conditions

Ambient temperature	-10 to 40 °C
Maximum wind speed	10.8 m/s (6 Beaufort)
Maximum slope angle	15°

3.3.8 Undercarriage

Driving speed	1st gear:0.8km/h 2nd gear: 1.45km/h 3rd gear: 2.8km/h
Tracks	Non marking
Pulling force	7.500 N
Maximum ball pressure	1.000 N
Clearance angle	20°
Maximum outrigger pressure per outrigger	3300 kg
Transport position ground pressure	0.73 kg/cm ²
Ground clearance	125 mm

3.3.9 Electrical system

System voltage (battery)	24 V
Drive system voltage	80 Vdc
Electric motor power	10.5kW
Charging	1.8kW@110VAC) 2.3kW@230VAC
Charging time (5 tot 95% SOC)	± 5 hours
Capacity	13 kWh

3.3.10 Hydraulic system

Volume of hydraulic tank	16 liter
Pump type	Gear pump
Maximum pump pressure	250 bar

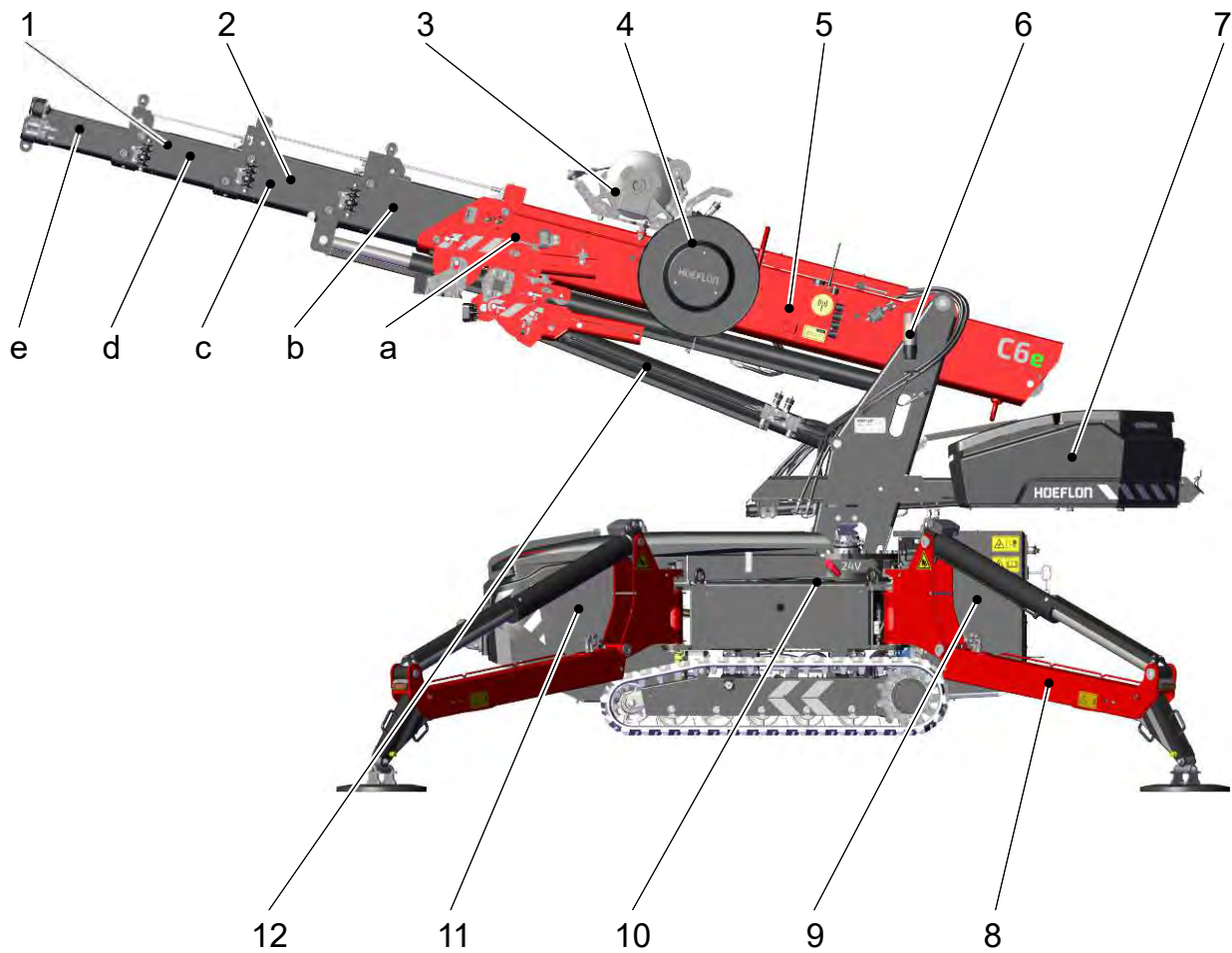
3.3.11 Remote control

Frequency	434 MHz
Range	250 m
Display	3-inch TFT LCD
Battery	Exchangeable
Portability	Hip or shoulder strap
Control	Accurate proportional control

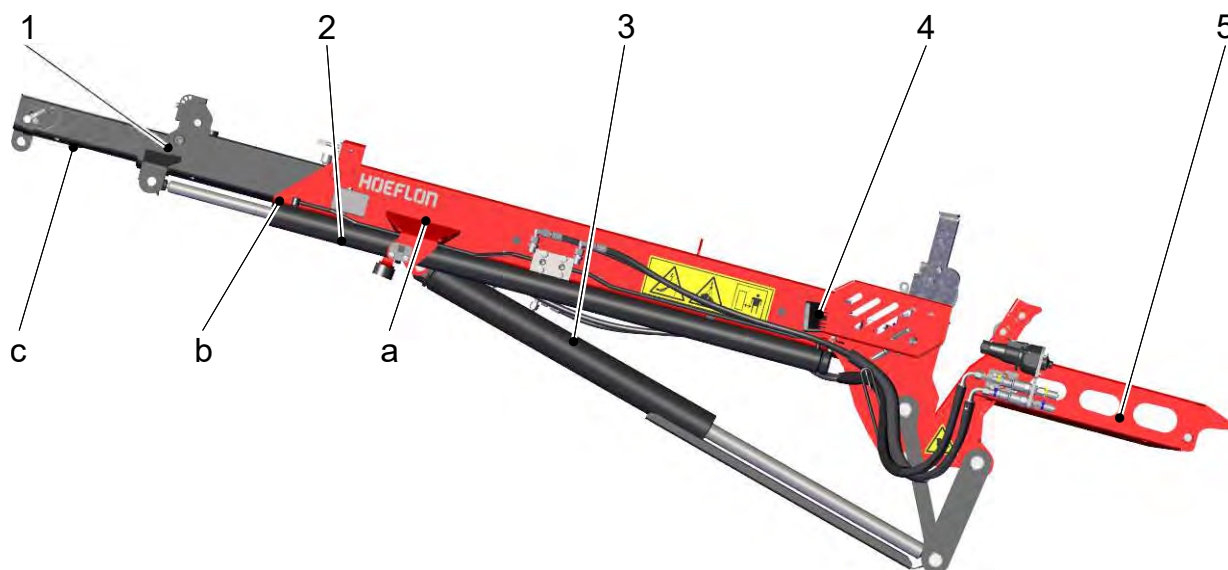
4.

Description

4.1 Main components



- | | |
|------------------------------------|-----------------------------------|
| 1. Boom sections | 5. Electrical cabinet - Boom |
| a. Main section 1 | 6. Stack light |
| b. Section 2 | 7. Counterweight |
| c. Section 3 | 8. Outrigger |
| d. Section 4 | 9. Electrical cabinet |
| e. Section 5 | 10. Charging cable for battery |
| 2. Extension cylinder for the boom | 11. Electric motor |
| 3. Winch | 12. Lifting cylinder for the boom |
| 4. Cable reel | |



- | | |
|-------------------|-----------------------------------|
| 1. Jib sections | 2. Extension cylinder for the jib |
| a. Main section 1 | 3. Lift cylinder for the jib |
| b. Section 2 | 4. Lamp |
| c. Section 3 | 5. Quick connect of the jib |

4.1.1 Boom

The boom:

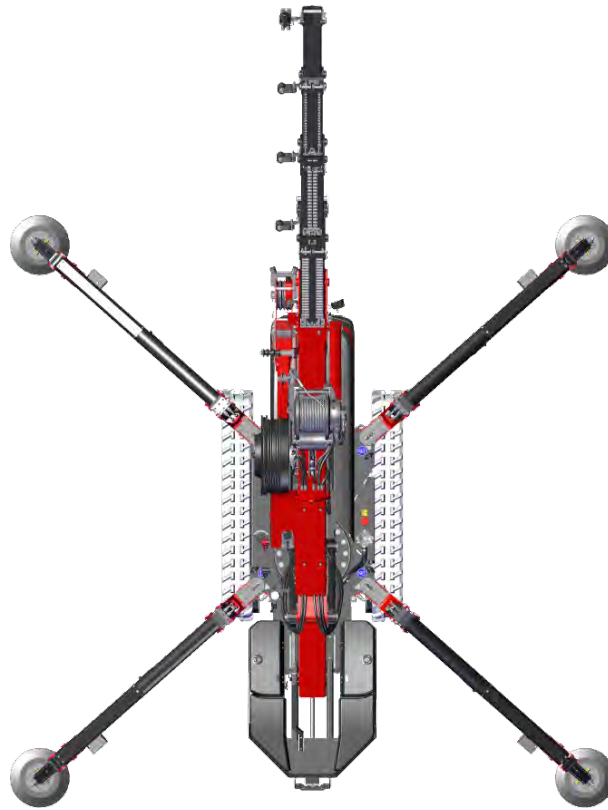
- consists of five sections fitted one inside the other.
- is very compact.
- extends or retracts with a hydraulic cylinder.

4.1.2 Counterweight

The counterweight:

- gives balance and stability to the compact crane during lifting.
- is hydraulically extended,
- can be removed without any additional lifting facilities.

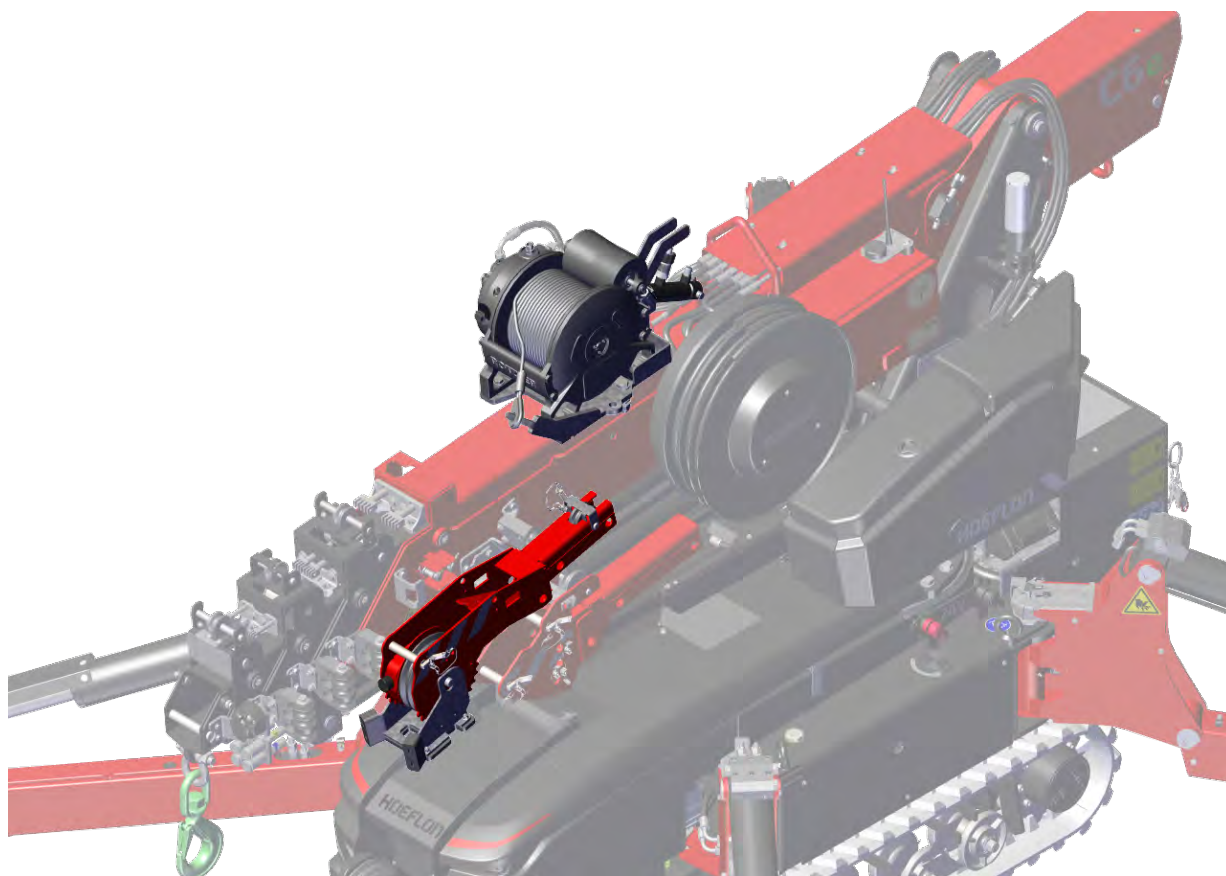
4.1.3 Outriggers



The C6e Gen 2 Compact crane has outriggers to offset the load weight and to increase stability when the crane is in use. The outriggers are heavy beams that extend from the chassis and use a flat pad to evenly distribute the crane's load. A flat surface is necessary for the outriggers to function properly.

4.2 Accessories

4.2.1 Winch



The winch makes it possible to lift loads with minimal movement of the boom or the jib. A repetitive lift becomes easier if you use the winch.

Use the winch if you need to lift a load behind a wall or into a cellar or a well

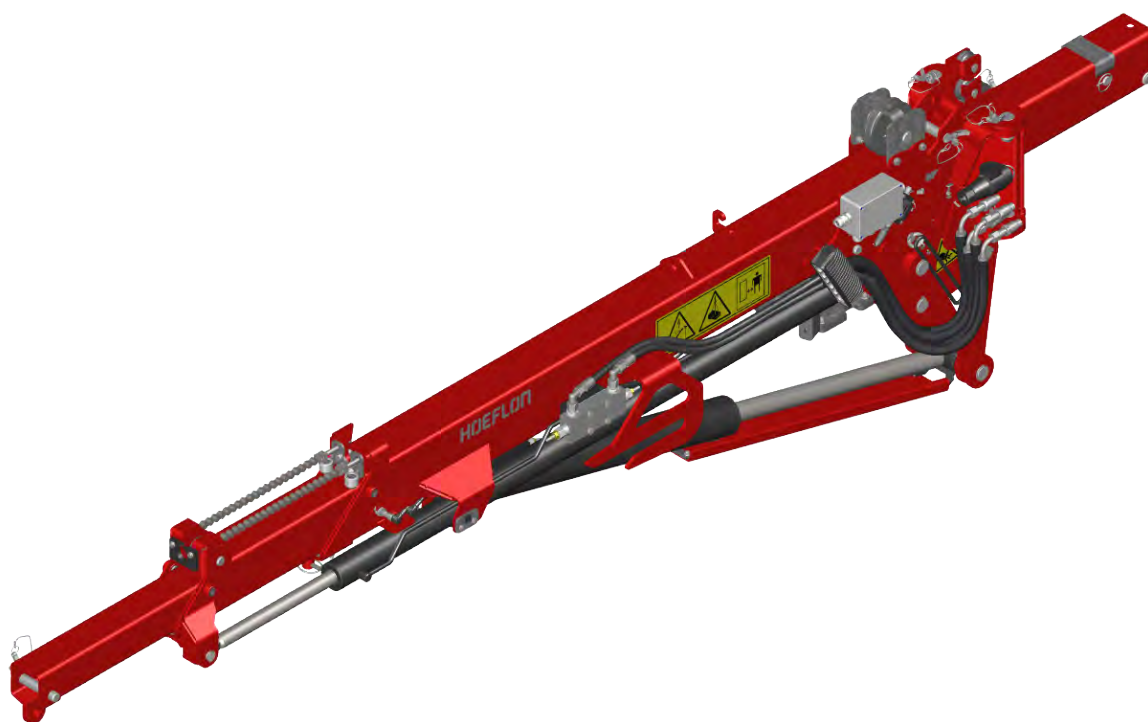
Only use the winch in combination with the winch head, the hook block and the hook.



Caution

The winch cable will become tangled if you do not use the hook block.

4.2.2 Jib

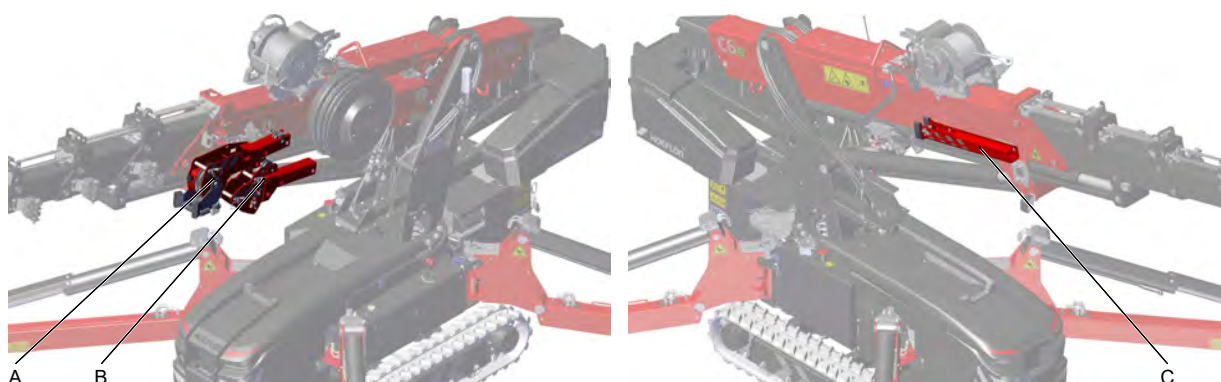


A jib increases the lifting height and working radius of your compact crane.

It also gives extra reach to access difficult areas on site such as over rooftops or high balustrades.

The compact crane can be used with or without the jib, depending on the lift (see 8.2 Different ways to lift a load)

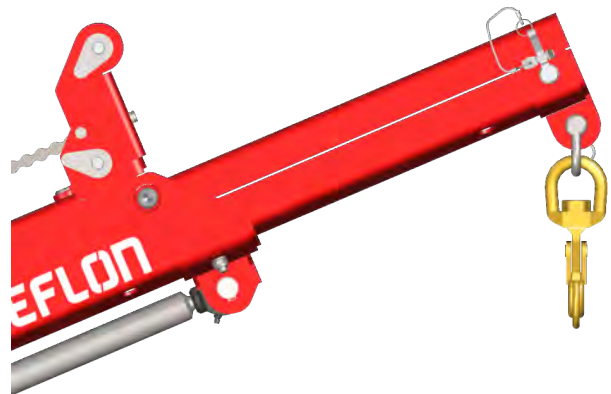
4.3 Lifting attachments



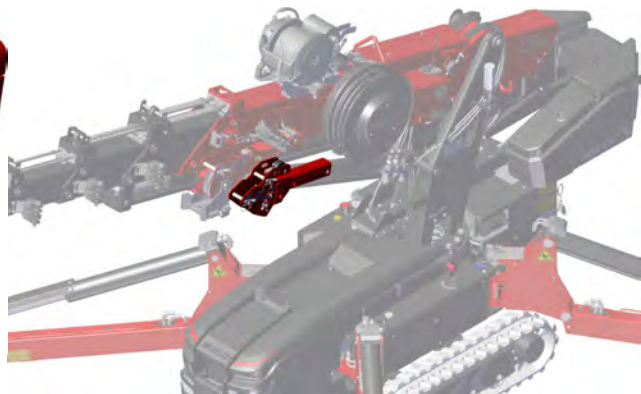
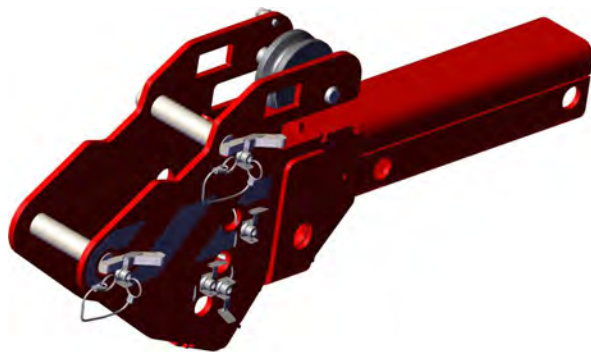
- A. Winch head
- B. Lifting adapter
- C. Searcher hook

4.3.1 Hook

Use the hook to lift a load directly with the boom or the searcher hook.

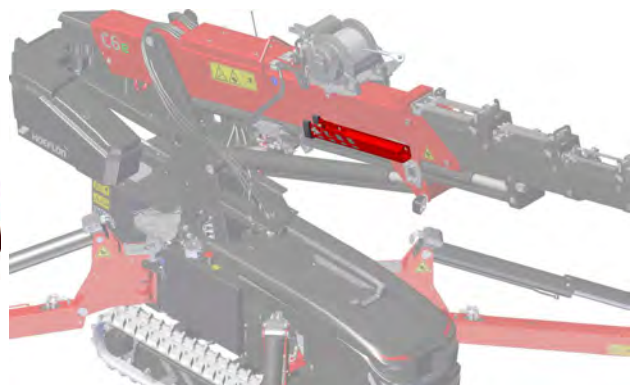


4.3.2 Lifting adapter



Use the lifting adapter to install a searcher hook or winch head at 30°, 15°, 0° or -30° to or the jib.

4.3.3 Searcher hook



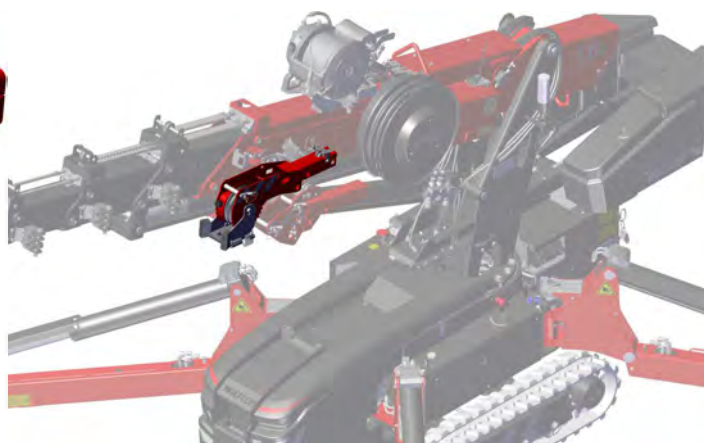
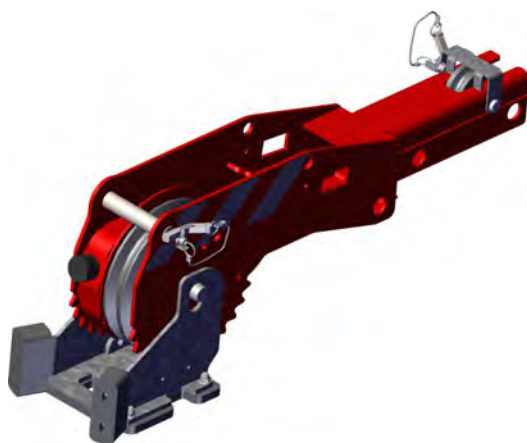
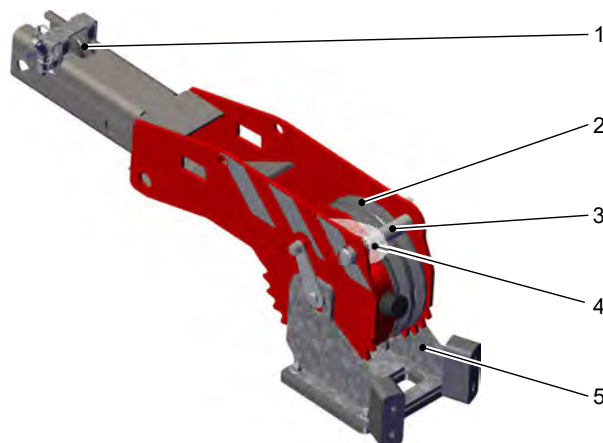
Use the searcher hook:

- to lift in areas where there is low headroom,
- to install a load close to a ceiling,
- to install a load under an overhead obstacle (such as a soffit or a balcony).

Install the searcher hook on the lifting adapter (see 4.3.2 Lifting adapter).

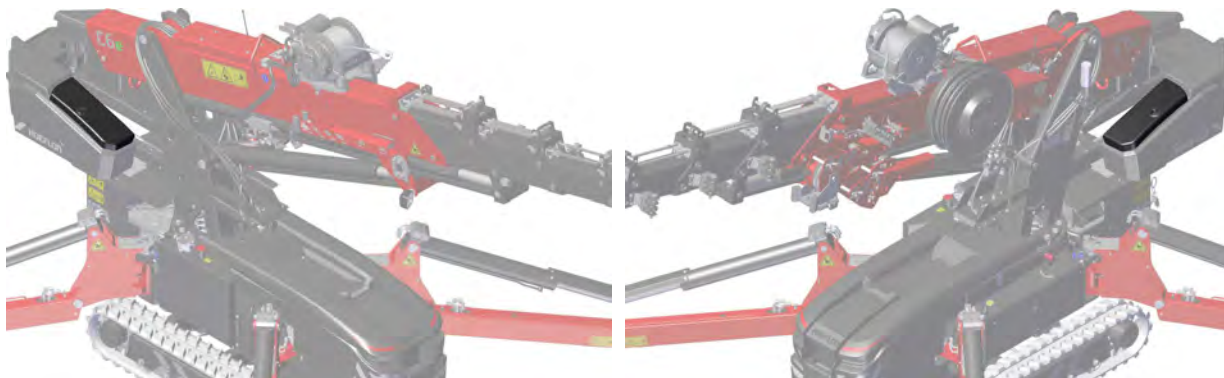
4.3.4 Winch head

1. Winch cable pulley - Only use at 30° setting.
2. Locking pin - To stop the cable from moving off the pulley.
3. Reeved cable - Connected to the locking pin.
4. Winch stop.



Only use the winch head in combination with a jib, the winch, the hook block and hook. Install the winch head on the lifting adapter (see 4.3.4 Winch head).

4.4 Storage compartments



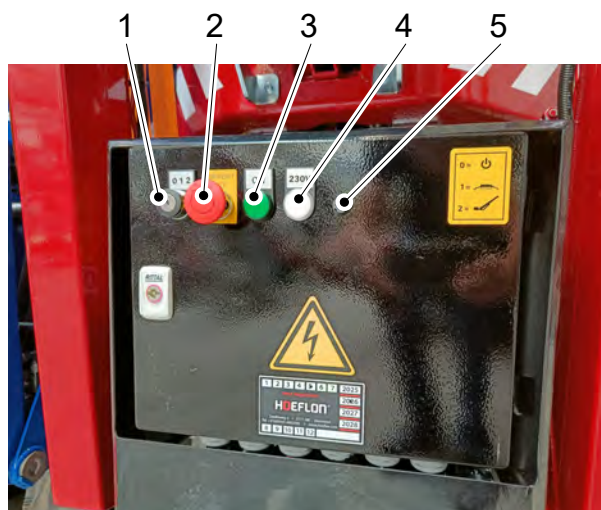
The compact crane has two storage containers. The location of the two storage containers is on the two sides of the counterweight.





Contents of the storage compartments:

- TBD

4.5 Electrical cabinet

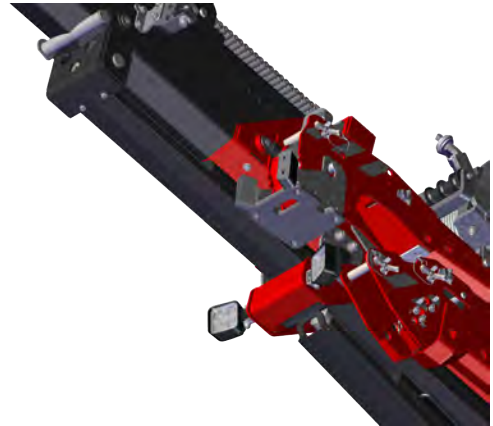
4.5.1 Controls on the outside of the electrical cabinet



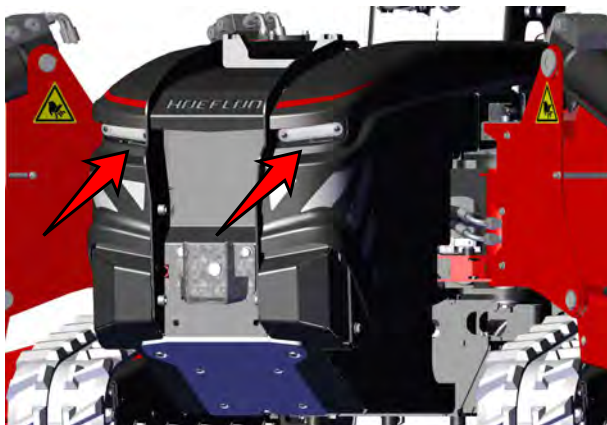
	Description	Function
1	Main switch	<p>0: Crane stopped. 1: Undercarriage (drive the crane or set the outriggers) 2: Upper part (lift with the crane or set the counterweight)</p> <p> Note If the key switch is set in position 1 you can switch between undercarriage and superstructure on the remote control.</p> <p>If the key switch is set in position 2 you cannot switch with the remote control, you can only control the superstructure.</p> <p> Note Use position 2 when the remote control is wired to the crane, (see 5.6 Wired connection of the remote control)</p>
2	Emergency stop button	<p>Push the emergency stop button to stop the crane immediately.</p> <p> Caution ONLY use in an emergency. Do not use this button for ANY other reason.</p> <p> Caution Do not use the emergency stop to normally stop the crane. You will break the battery.</p>
3	Power on indicator	Is ON when the main switch is set to 1 or 2
4	Mains power indicator	Is ON when the crane is connected to the mains
5	Connection for the remote control	<p>Connect the remote control to the C6e Gen 2 Compact crane with the emergency control cable:</p> <ul style="list-style-type: none"> • if the remote control cannot make radio contact • if the display screen is broken • if the battery of the remote control is empty and you do not have a replacement battery.

4.6 Work lights

- The crane has two work lights at the end of the lifting cylinder under the boom.



- The jib also has one work light. It is on the left of the jib





- The undercarriage has two work lights on the front and two work lights on the counterweight.



Note

The work lights on the undercarriage are always ON.

4.7 Stack light

Light										Sound	Explanation	
■	■	■	■								Crane controls active	
				■	■	■	■	■	■		Driving	
■	■	■	■	■	■	■	■	■	■		90% to 100% load	
■	■	■	■				■	■	■		100% load	
■	■	■	■				■	■	■		Override 100% to 110% (with the button on the remote control)	

5.

Remote control

5.1 Introduction



Use the remote control to operate the C6e Gen 2 Compact crane.

Wear the remote control using the belt or the shoulder strap.

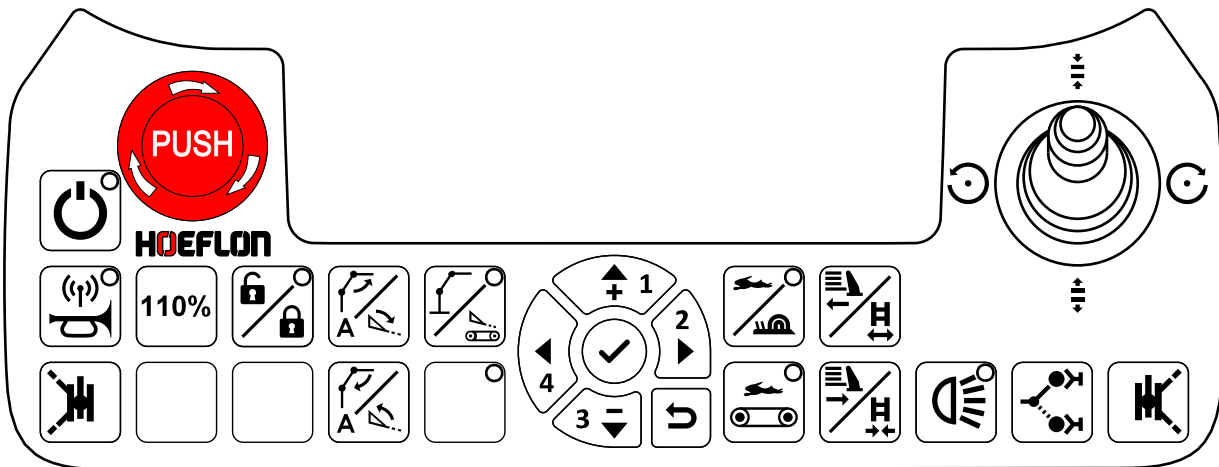
Always have a second battery in the charger.

- Keep the remote control clean.
- Make sure that you can read the pictograms and the display.

The remote control is sealed against splashed water and rain.





- Do not clean the remote control or the receiver with high pressure.
- Do not soak the remote control or the receiver in liquid.




5.2 Buttons












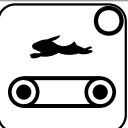




5.2.1 Control buttons for the compact crane

Button	Function	Explanation
	Emergency stop	Immediately stops all functions of the compact crane. <div style="display: flex; align-items: center;"> <p>Caution ONLY use in an emergency. Do not use this button for ANY other reason.</p> </div>
	On/Off	Start and stop the remote control. The remote control is ON when the LED is ON.
	Connect remote control and compact crane / operate horn	Push once to connect the remote control with the compact crane. The remote control is connected to a compact crane when the LED is ON. This button operates the horn when the compact crane is connected.
	Temporarily increase RCL	(see 5.2.3 110% button)
	Control lock	Locks the controls. Use this when, for example, if you are working near the crane and you don't want it to move if you accidentally move a lever.

Button	Function	Explanation
	<p>Automatically deploy the crane or the outriggers</p>	<p> Note Kraan moet binnen bereik PC zijn, wat bedoel je hiermee?</p> <p>Undercarriage mode</p> <p> Note If you release the button then the compact crane stops moving immediately.</p> <p>Automatically:</p> <ul style="list-style-type: none"> • Lowers the outriggers so that the each touch the ground • Lifts the crane. • Levels the crane. <p> Note You must put the outriggers in position before automatically deploying the undercarriage.</p> <p>Each outrigger must be between 25° and 65°.</p>

Button	Function	Explanation
		<p>Superstructure mode</p> <p> Note Fully deploy the undercarriage and fully make the crane level before deploying the superstructure.</p> <p> Note If you release the button then the compact crane stops moving immediately.</p> <p> Note You can operate the counterweight during automatic deployment.</p> <p>Automatically:</p> <ul style="list-style-type: none"> • Raises the boom. • Extends the boom. • Turns the jib out (if the jib is installed). • Extends the jib (if the jib is installed).

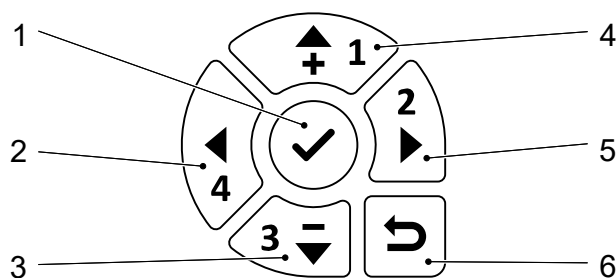
Button	Function	Explanation
	<p>Automatically retract the crane or the outriggers</p>	<p>Undercarriage mode</p> <p> Note If you release the button then the compact crane stops moving immediately.</p> <p>Automatically.</p> <ul style="list-style-type: none"> • Lowers the crane. • Moves the outriggers to the storage position. <hr/> <p>Superstructure mode</p> <p> Note If you release the button then the compact crane stops moving immediately.</p> <p>Automatically:</p> <ul style="list-style-type: none"> • Fully retracts the jib. • Fully turns the jib IN. • Fully retracts the boom. • Fully lowers the boom. <p> Note You can retract the counterweight during automatic retraction.</p> <p> Note The crane will move irregularly. This is necessary to:</p> <ul style="list-style-type: none"> • avoid collisions between moving parts • make sure that there is enough hydraulic pressure to move each part.
	<p>Undercarriage / superstructure toggle</p>	<p>LED OFF: control the undercarriage (driving) LED ON: control the superstructure (lifting)</p>

Button	Function	Explanation
	Release left outriggers	Push one of the buttons to unlock the outriggers on one of the two sides of the crane. When the outriggers are unlocked you can turn them to the correct position. Push one of the buttons and use an outrigger lever to extend or retract the outrigger(see 5.3 Levers). If none of these buttons are pushed then the outrigger legs are locked in position and cannot move.
	Release right outriggers	
	Crane speed	Toggle between normal and slow precise compact crane movements. The compact crane is in normal moving mode when the LED is ON.
	Driving speed	Initially the compact crane moves with a SLOW driving speed. The LED blinks when you push the button. The compact crane automatically selects SLOW or FAST driving speed as necessary.
	Extend crawler tracks / counterweight	Undercarriage mode Extend the crawler tracks.
		Superstructure mode Extend the counterweight.
	Retract crawler tracks / counterweight	Undercarriage mode Retract the crawler tracks.
		Superstructure mode Retract the counterweight.
	Work light	Toggles the work lights ON or OFF (see 5.2.6 Work light) .
	Lock/unlock	Undercarriage mode This button can unlock the counterweight while in driving mode (see 7.7.3 Operate the counterweight while driving).
		Superstructure mode This button controls the multitool. Refer to the manual of the multitool for more information.

**Note**

If a LED is lit, the function is active.

5.2.2 Navigation panel



- | | |
|---------------------------|----------------------------|
| 1. Confirm / go into menu | 4. Up |
| 2. Left | 5. Right |
| 3. Down | 6. Return to previous menu |

Use the navigation panel on the remote control:

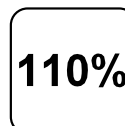
- to navigate through the menus.
- to calibrate the levers (see 5.3.2 Calibration)

5.2.3 110% button

The Rated Capacity Limiter (RCL) is increased to 110% while you push the button.

Only use this function to move the compact crane back to safety from an unsafe situation.

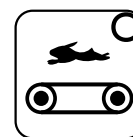
Do not use this function to increase the outreach of the compact crane or to continue winching.



5.2.4 Driving speed


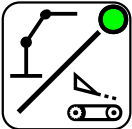
The crane is in LOW gear by default. The crane has low speed but high torque.

Push the button to enter HIGH gear. The LED will blink. The crane has a higher speed but a lower torque.



The crane has an automatic gear shift in HIGH gear. If the hydraulic pressure gets too high (for example: when turning) the compact crane automatically switches to LOW gear. When the hydraulic pressure decreases again the compact crane will shift back to HIGH gear

5.2.5 Undercarriage / Superstructure toggle button

LED status		
	OFF	The levers operate the undercarriage of the crane: <ul style="list-style-type: none"> • Crawler tracks
	ON	The levers operate the superstructure of the crane: <ul style="list-style-type: none"> • Boom • Jib • Winch



Note

This button only works if no lever or button has been operated for at least two seconds.

After pressing the button, the crane's mode of operation changes and the information on the display changes.

5.2.6 Work light

Pressing the "Work light" button toggles the work lamps.

The LED is ON if a (any) lamp is ON.



Operating the lights on the undercarriage

Make sure that the undercarriage is active (LED is OFF).

The work lights on the undercarriage are always ON.

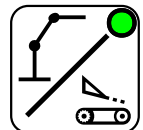
The lights on the outrigger legs flash by default.



Push the button one time	The lights on the outrigger legs go OFF.
Push the button two times	The lights on the outrigger legs flash.

Operating the lights on the superstructure

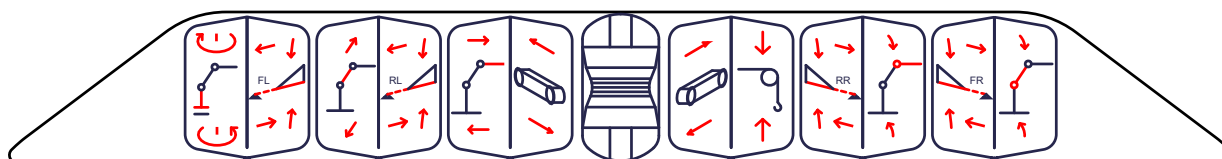
Make sure that the superstructure is active (LED is ON).



Push the button one time	The work light on the boom goes ON.
Push the button two times	The work light on the jib goes ON. The work light on the boom goes OFF.
Push the button three times	All work lights on the superstructure go ON.
Push the button four times	All work lights on the superstructure go OFF.

5.3 Levers

5.3.1 Default configuration



Undercarriage

If the LED on button is OFF, the levers operate the undercarriage of the crane.

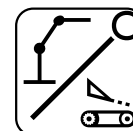


Image	Function	Pull the lever rearward	Push the lever forward
	Lower / raise outrigger (FL - front left)	Up	Down
	Extend / retract outrigger (FL - front left)	Retract	Extend
	Lower / raise outrigger (RL - rear left)	Up	Down


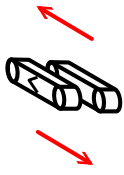
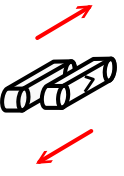
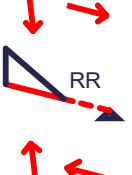
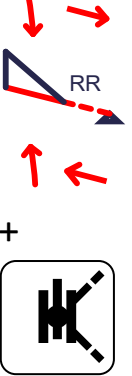
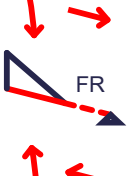
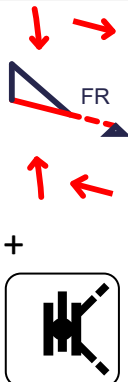
Image	Function	Pull the lever rearward	Push the lever forward
 <p>RL</p>	<p>Extend / retract outrigger (RL - rear left)</p>	<p>Retract</p>	<p>Extend</p>
	<p>Operate crawler track (L - left)</p>	<p>Backwards</p>	<p>Forwards</p>
	<p>Operate crawler track (R - right)</p>	<p>Backwards</p>	<p>Forwards</p>
 <p>RR</p>	<p>Lower / raise outrigger (RR - rear right)</p>	<p>Up</p>	<p>Down</p>
 <p>RR</p>	<p>Extend / retract outrigger (RR - rear right)</p>	<p>Retract</p>	<p>Extend</p>
 <p>FR</p>	<p>Lower / raise outrigger (FR - front right)</p>	<p>Up</p>	<p>Down</p>

Image	Function	Pull the lever rearward	Push the lever forward
	Extend / retract outrigger (FR - front right)	Retract	Extend

Superstructure

If the LED on button is ON, the levers operate the superstructure of the crane.

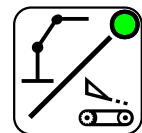


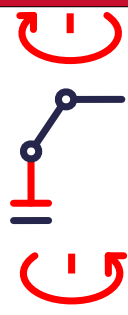
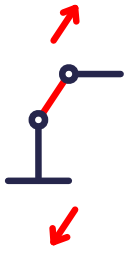
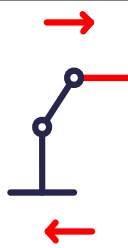

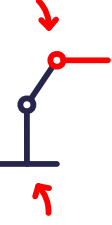
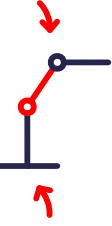
Image	Function	Pull the lever rearward	Push the lever forward
	Slew boom	Left	Right
	Extend / retract boom	Retract	Extend
	Extend / retract jib	Retract	Extend

Image	Function	Pull the lever rearward	Push the lever forward
	Winch in / out	In	Out
	Lift / lower jib	Lift	Lower
	Lift / lower boom	Lift	Lower

5.3.2 Calibration

Inspect the lever calibration

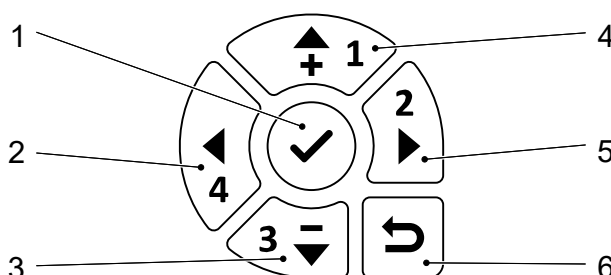
Calibrate the levers if:

- the levers of the remote control do not respond over the entire range of movement.
- the remote control cannot connect to the compact crane.



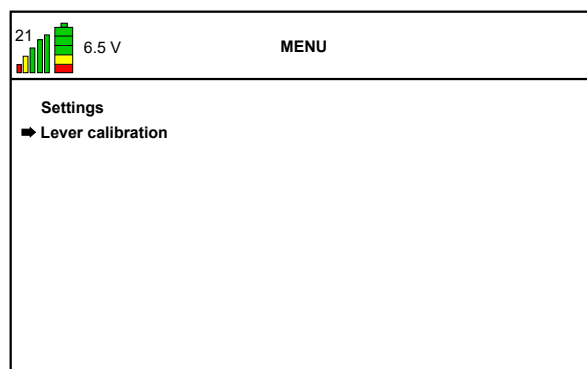
Note

If the levers are in the central position but the remote control gives a "out of center" response then the remote control cannot connect to the compact crane.

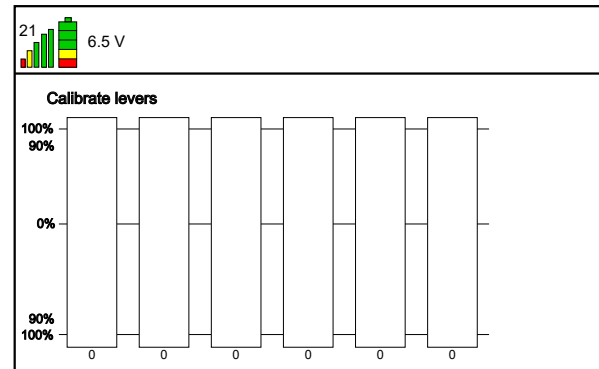


- | | |
|---------------------------|----------------------------|
| 1. Confirm / go into menu | 4. Up |
| 2. Left | 5. Right |
| 3. Down | 6. Return to previous menu |

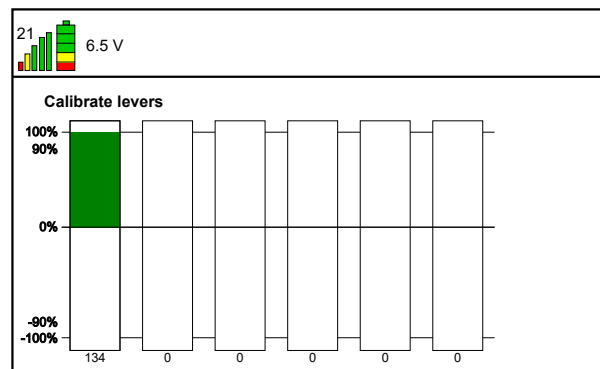
1. Start the remote control.
2. Push the **Confirm** button (1) to go into the *remote control menu*.
3. Push the **Down arrow** to move the arrow in the display until it points to *Lever calibration*.



4. Push the **Confirm** button (1) to go into the *Lever calibration* menu.



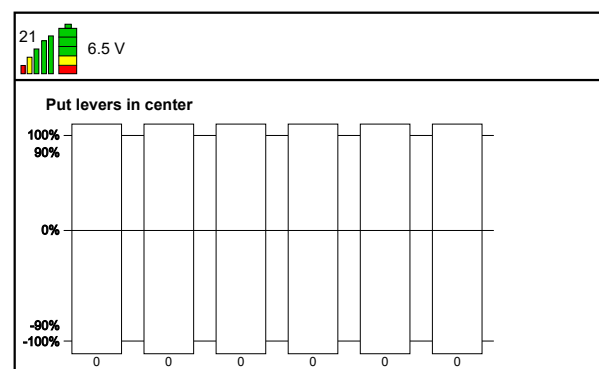
5. When you operate a lever the related bar must turn green.
6. Fully push the lever.
- The green bar must be at 134.
 - Recalibrate the lever if the green bar is at 134 before fully pushing the lever.
 - Recalibrate the lever if the green bar is not at 134.



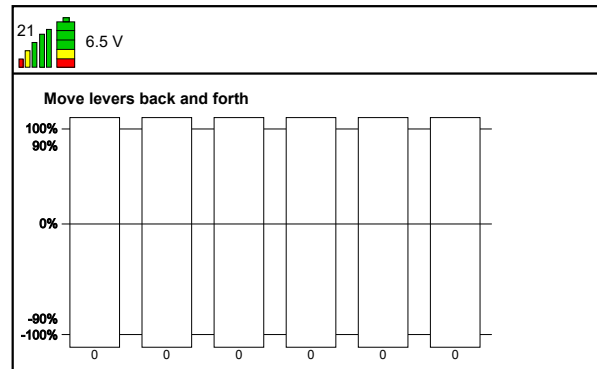
7. Fully pull the lever.
- The green bar must be at -134.
 - Recalibrate the lever if the green bar is at -134 before fully pulling the lever.
 - Recalibrate the lever if the green bar is not at -134.
8. Do steps 6 and 7 again for the remaining levers.

Calibrate the levers:

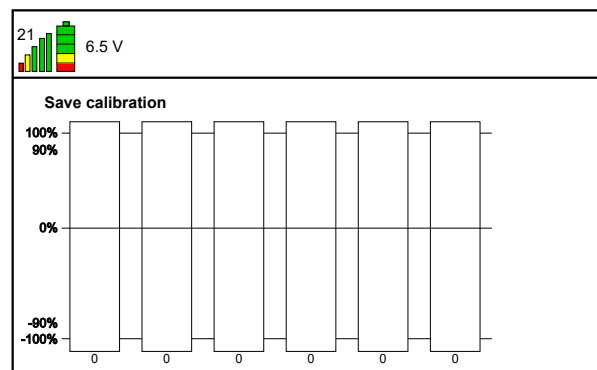
1. Push the **Confirm** button (1). The text *Put levers in center* is now displayed.
2. Make sure that all the levers are in the center position.



3. Push the **Confirm** button (1). The text *Move levers back and forth* is now displayed.
4. Slowly move the levers one at a time, from all the way back to all the way forward.



5. Push the **Confirm** button (1). The text *Save calibration* is now displayed.
6. Move the levers one after the other. Move the levers all the way in both directions.
7. Make sure that each bar becomes fully green.
8. Push the **Confirm** button (1). The settings are saved
9. Push the **Back** button (6) two times to go back to the home screen.

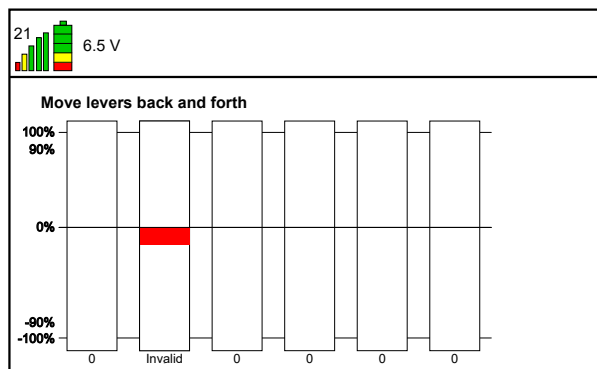


Incorrect calibration

This screen is shown if a lever does not operate correctly.

Do not use the compact crane.

Speak to your your Hoeflon dealer.



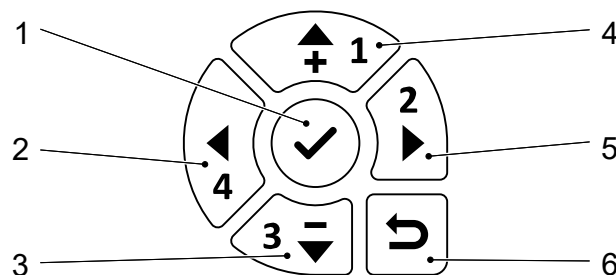
5.3.3 Function mapping

The default lever configuration is set by Hoeflon. You can change the configuration so that the C6e Gen 2 Compact crane is operated in the same way as many truck-mounted cranes.

You can only change the lever configuration for the superstructure. You cannot change the lever configuration of the undercarriage.

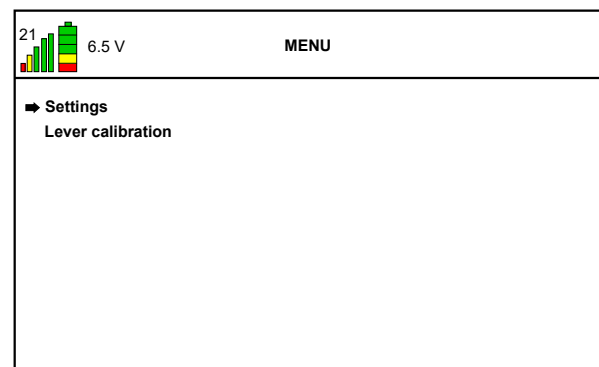
Speak to your Hoeflon dealer if you want to make a different lever configuration.

Set the lever configuration to "custom"

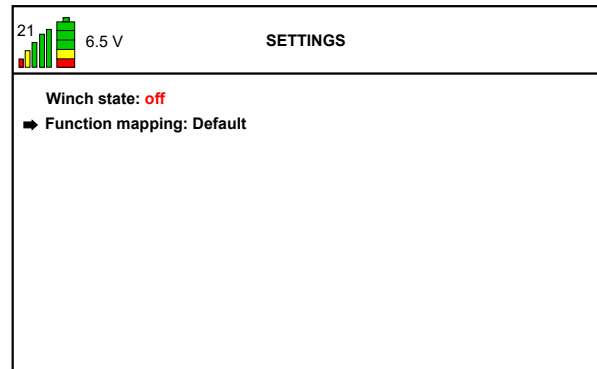


- | | |
|---------------------------|----------------------------|
| 1. Confirm / go into menu | 4. Up |
| 2. Left | 5. Right |
| 3. Down | 6. Return to previous menu |

1. Start the remote control.
2. Push the **Confirm** button (1) to go into the *Remote control menu*.
3. Make sure that the arrow in the display points to *Settings*.
 - Push the **Up arrow** or the **Down arrow** to move the arrow in the display until it points to *Settings*.
4. Push the **Confirm** button (1) to go into the *Settings menu*.





5. Push the **Down arrow** (3) to move the arrow in the display until it points to .
6. Push the **Right arrow** (5).
7. Select the configuration that you want.
8. Push the **Back** button (6) two times to go back to the home screen.



Custom configuration

Image	Function	Lever backwards	Lever forwards
	Slew main boom	Left	Right
	Boom up and down	Boom up	Boom down
	Extend/retract main boom	Retract	Extend
	Jib up and down	Up	Down

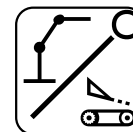
Image	Function	Lever backwards	Lever forwards
	Extend/retract jib	Retract	Extend
	Raise and lower winch	Raise	Lower

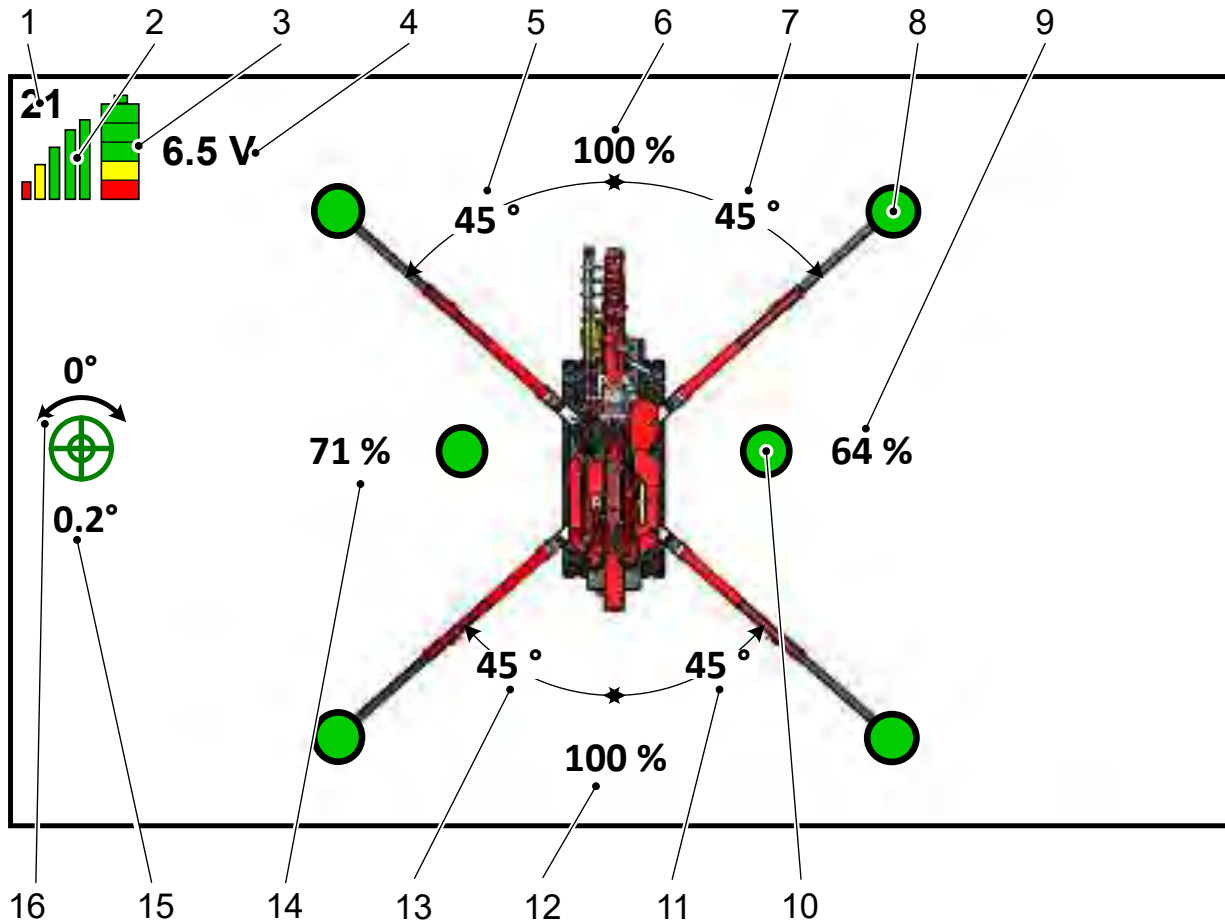
5.4 Display

5.4.1 While controlling the undercarriage

If the LED on button is OFF, the levers operate the undercarriage of the crane.

The following display is shown.

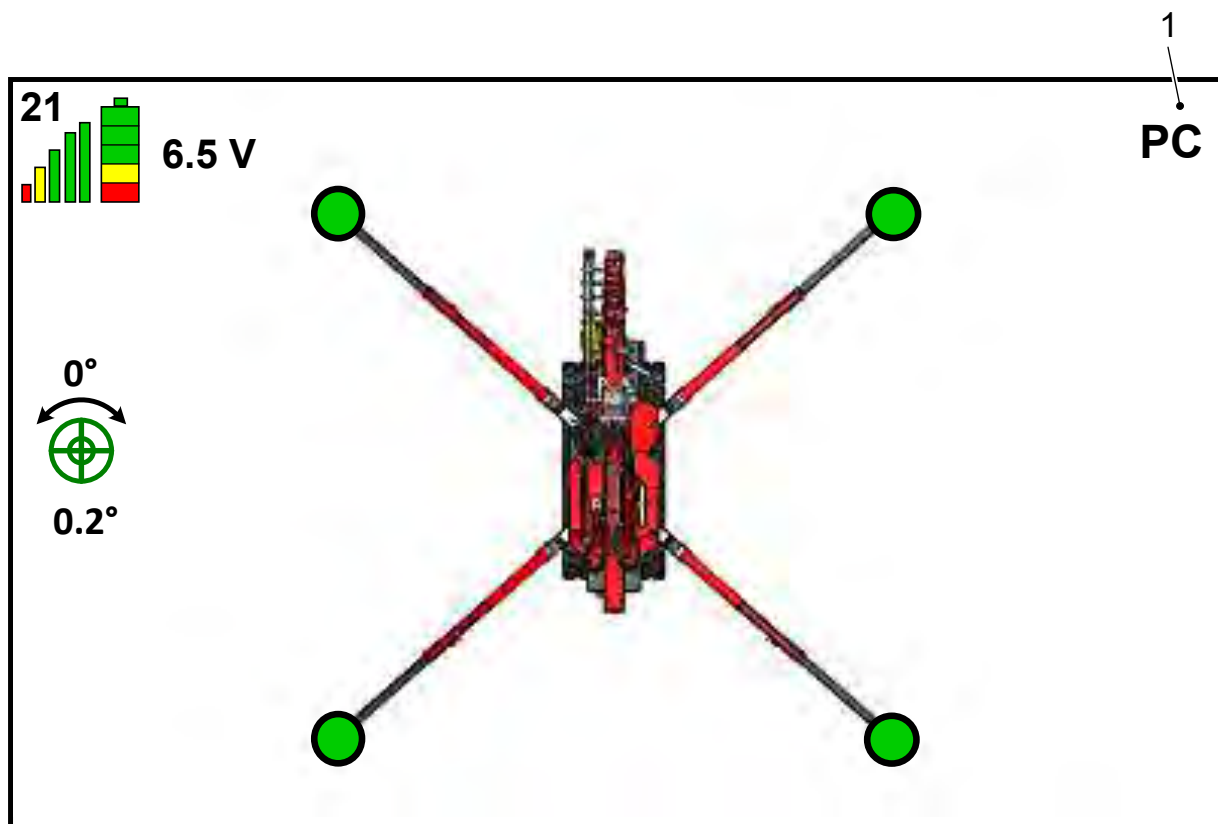




No.	Function	Explanation
1	Channel	The communication channel that is used. This may change when you start the remote control again.
2	Signal strength	More bars > Better signal Stop and start the remote control to select a different channel if the signal is too weak.
3	State of charge of remote control battery	More bars > More charge. Replace the battery when only the red bar shows (see 5.7 Replacing and charging the remote control battery)
4	Voltage	The battery voltage of the remote control.
5	Outrigger angle - Left Front	The angle between the outrigger and the centerline of the crane.
6	Lifting capacity - Front	The permitted lifting capacity in percent. This value is determined by: <ul style="list-style-type: none"> • The angles of the outriggers. • The current Outreach radius. • The value given by the load chart (see Appendix)

No.	Function	Explanation
7	Outrigger angle - Right Front	The angle between the outrigger and the centerline of the crane.
8	Outrigger is set correctly	A green circle shows that the outrigger is correctly loaded.
9	Lifting capacity - Right	The permitted lifting capacity in percent. This value is determined by: <ul style="list-style-type: none"> • The angles of the outriggers. • The current Outreach radius. • The value given by the load chart (see Appendix)
10	Track is extended	A green circle shows that a track is fully extended
11	Outrigger angle - Right Rear	The angle between the outrigger and the centerline of the crane.
12	Lifting capacity - Rear	The permitted lifting capacity in percent. This value is determined by: <ul style="list-style-type: none"> • The angles of the outriggers. • The current Outreach radius. • The value given by the load chart (see Appendix)
13	Outrigger angle - Left Rear	The angle between the outrigger and the centerline of the crane.
14	Lifting capacity - Left	The permitted lifting capacity in percent. This value is determined by: <ul style="list-style-type: none"> • The angles of the outriggers. • The current Outreach radius. • The value given by the load chart (see Appendix)
15	Digital bubble level	The green circles indicate if the crane is level. The number of degrees shows the tilt of the crane. Use the spirit level on the crane to determine which direction the crane is leaning.
16	Slew indicator	The angle between the boom and the forward position.

5.4.2 Pick and carry mode



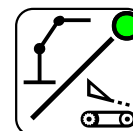
No.	Function	Explanation
1	Indicator for pick and carry mode.	Tells the operator that the crane is in "Pick and carry" mode.

The outriggers are not set in pick and carry mode.

5.4.3 While controlling the superstructure

If the LED on button is ON, the levers operate the superstructure of the crane.

The display that is shown has information on:



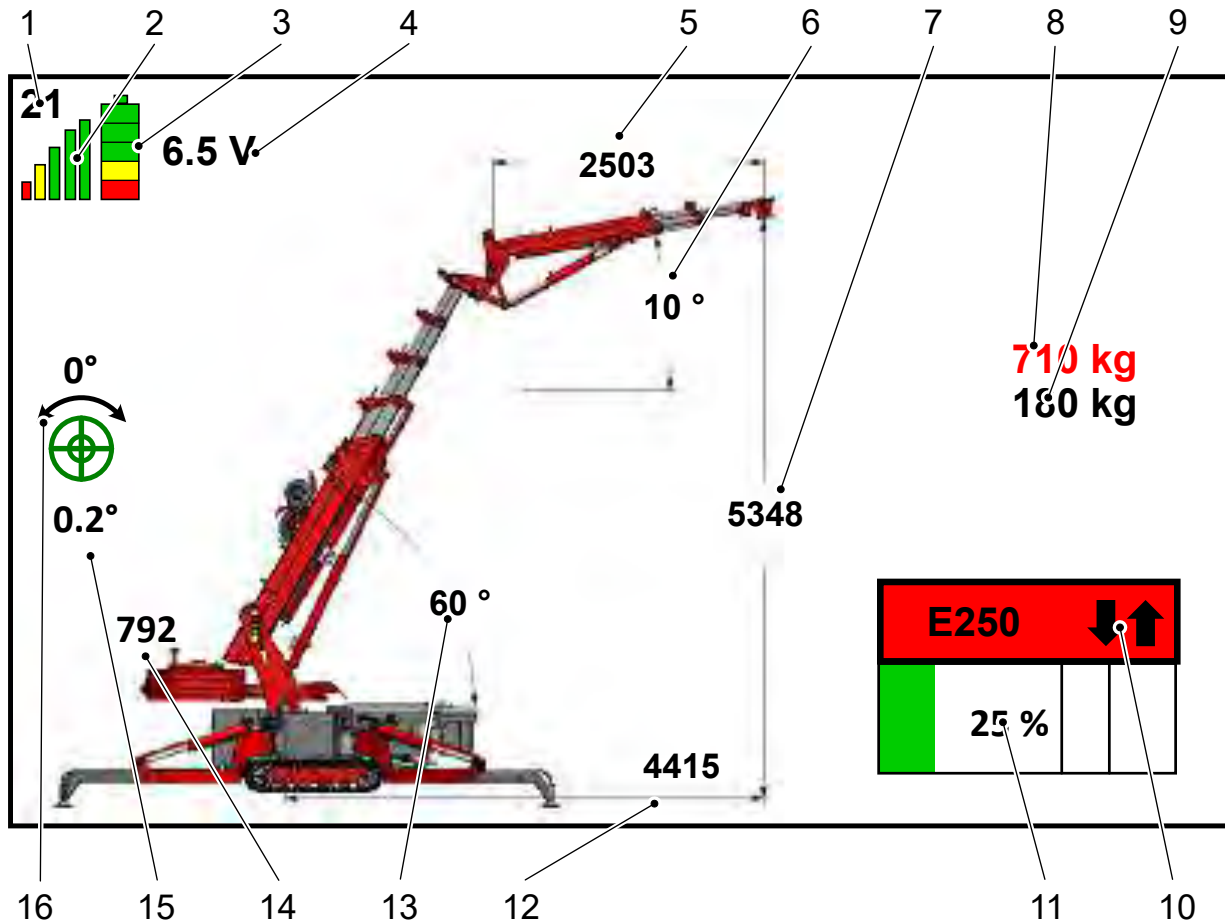
- the boom
- the jib.
- the counterweight.








Note


You will see a different screen when you use a different crane configuration.

- if you have not installed a jib then: the jib, the jib extension and the jib angle are not displayed.
- If the counterweight is not installed then: the counterweight and the counterweight position are not displayed

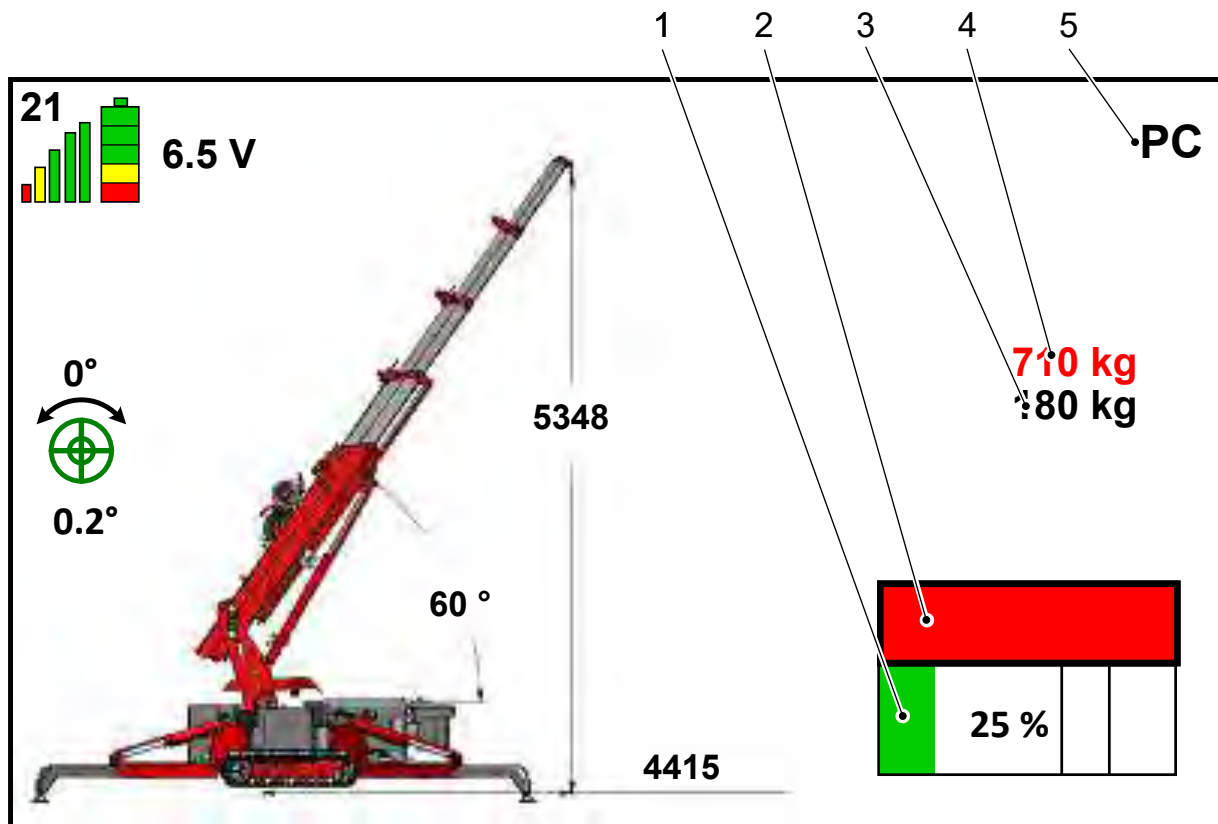


No.	Function	Explanation
1	Channel	The communication channel that is used. This may change when you start the remote control again.
2	Signal strength	More bars > Better signal Stop and start the remote control to select a different channel if the signal is too weak.
3	State of charge of remote control battery	More bars > More charge. Replace the battery when only the red bar shows (see 5.7 Replacing and charging the remote control battery)
4	Voltage	The battery voltage of the remote control.

No.	Function	Explanation									
5	Outreach of jib	<p>The length of the jib.</p>  <p>Note Only shown if the jib is installed.</p>									
6	Angle of jib	<p>The angle between the jib and the horizontal.</p>  <p>Note Only shown if the jib is installed.</p>									
7	Hoisting height	Total height of the hook above the bottom of the tracks.									
8	Maximum load	The maximum load that the crane can lift at this outreach and angle.									
9	Load weight	The current load hanging from the lifting hook.									
10	Errors and warnings	<p>All errors and warnings are displayed here. An error has a red background, a warning has a yellow background.</p>  <p>Caution The crane will not continue with an error, you must move the crane back to safety before you can continue.</p>  <p>Note Use the UP/DOWN arrow keys on the controller to scroll between messages. Use the LEFT/RIGHT arrow keys on the controller for more information</p>									
11	Load percentage	<p>$(\text{Current load} / \text{maximum load}) \times 100\%$</p> <table border="1"> <tbody> <tr> <td>Green</td> <td>0 -90%</td> <td>Safe working load.</td> </tr> <tr> <td>Yellow</td> <td>90 - 100%</td> <td>Safe working load. The crane speed decreases.</td> </tr> <tr> <td>Red</td> <td>Above 100%</td> <td>The load is more than the safe working load of the crane. Do not continue working. You must move the crane back to safety immediately.</td> </tr> </tbody> </table>	Green	0 -90%	Safe working load.	Yellow	90 - 100%	Safe working load. The crane speed decreases.	Red	Above 100%	The load is more than the safe working load of the crane. Do not continue working. You must move the crane back to safety immediately.
Green	0 -90%	Safe working load.									
Yellow	90 - 100%	Safe working load. The crane speed decreases.									
Red	Above 100%	The load is more than the safe working load of the crane. Do not continue working. You must move the crane back to safety immediately.									
12	Outreach radius	<p>The horizontal distance between the center of the slewing ring and the tip of the jib.</p>  <p>Note If the crane does not have a jib then the outreach radius is the distance between the center of the slewing ring and the tip of the boom. the jib is not displayed.</p>									

No.	Function	Explanation
13	Angle of boom	The angle between the boom and the horizontal.
14	Counterweight position	The extended position of the counterweight in mm.  Note Only shown if the counterweight is installed.
15	Digital bubble level	The green circles indicate if the crane is level. The number of degrees shows the tilt of the crane.
16	Slew indicator	The angle between the boom and the forward position.

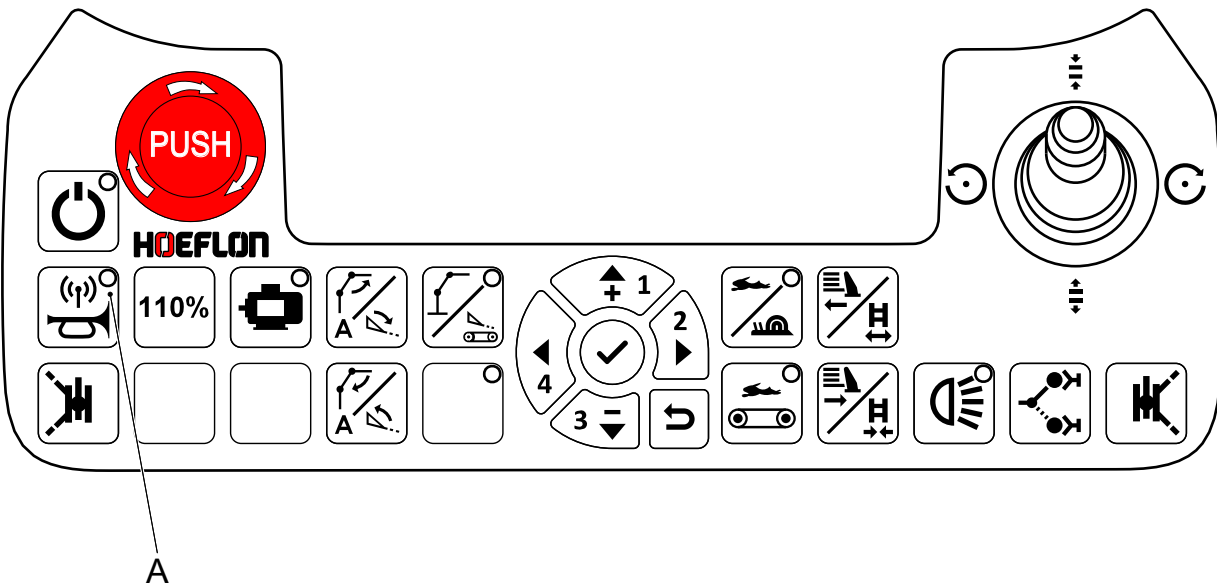
5.4.4 Pick and carry mode



No.	Function	Explanation									
1	Load percentage	<p>(Current load / maximum load) x 100%</p> <table border="1"> <tr> <td>Green</td> <td>0 - 100%</td> <td>Safe working load</td> </tr> <tr> <td>Yellow</td> <td>100 - 110%</td> <td>You have temporarily increased the RCL. Do not continue working. You must move the crane back to safety immediately.</td> </tr> <tr> <td>Red</td> <td>Above 110%</td> <td>The load is more than the safe working load of the crane. You must move the crane back to safety immediately.</td> </tr> </table>	Green	0 - 100%	Safe working load	Yellow	100 - 110%	You have temporarily increased the RCL. Do not continue working. You must move the crane back to safety immediately.	Red	Above 110%	The load is more than the safe working load of the crane. You must move the crane back to safety immediately.
Green	0 - 100%	Safe working load									
Yellow	100 - 110%	You have temporarily increased the RCL. Do not continue working. You must move the crane back to safety immediately.									
Red	Above 110%	The load is more than the safe working load of the crane. You must move the crane back to safety immediately.									

No.	Function	Explanation
2	Errors and warnings	<p>All errors and warnings are displayed here. An error has a red background, a warning has a yellow background.</p> <p>Caution</p> <p>The crane will not continue with an error, you must move the crane back to safety before you can continue.</p> <p>Note</p> <p>Use the UP/DOWN arrow keys on the controller to scroll between messages.</p> <p>Use the LEFT/RIGHT arrow keys on the controller for more information</p>
3	Maximum load	The maximum load that the crane can lift at this outreach and angle.
4	Load weight	The current load hanging from the lifting hook.
5	Indicator for pick and carry mode.	Tells the operator that the crane is in "Pick and carry" mode.

5.5 Connect with the compact crane



1. Start the compact crane and the remote control.
2. The remote control automatically connects to the compact crane.

3. Look if the LED on the button flashes.
 - If the LED flashes the RC6 is trying to connect to the compact crane.
 - If the LED does not flash, then there is a problem with the RC6.
 - When the light is ON, the RC6 is connected to the compact crane.
 - If the LED goes OFF, the RC6 cannot connect.

5.5.1 The LED does not flash

There is a problem with the RC6.

1. Make sure that all the levers are in the central position.
2. Calibrate the RC6 if all the levers are in the central position (see 5.3.2 Calibration)
3. Do an inspection of the **Connect** button (A).
4. Speak to your Hoeflon dealer if you still cannot connect.

5.5.2 The LED stops flashing and goes OFF

There is a problem with the compact crane. Speak to your Hoeflon dealer. Do not continue working.

5.6 Wired connection of the remote control

Connect the remote control to the C6e Gen 2 Compact crane with the emergency control cable:

- if the remote control cannot make radio contact
- if the display screen is broken
- if the battery of the remote control is empty and you do not have a replacement battery.



Caution

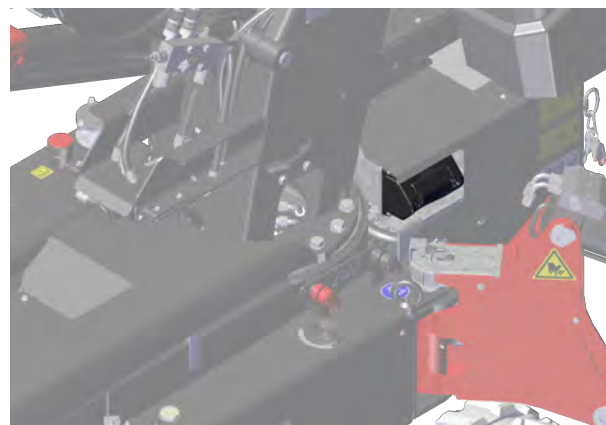
When the emergency control cable is connected, the display screen no longer works.



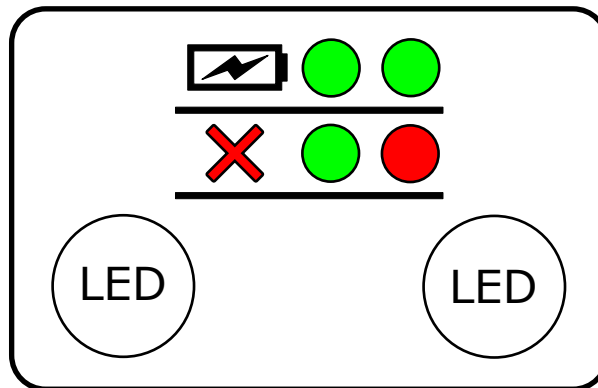
1. Connect one end of the emergency control cable into the socket on the bottom of the remote control.
2. Connect the other end of the cable into the socket on the electrical cabinet of the compact crane.
3. Use the remote control as usual.

5.7 Replacing and charging the remote control battery

1. Push in the two clips (1) on the remote control next to the battery (2).
2. Remove the discharged battery (2) from the remote control.
3. Push the charged battery in position.
 - The two clips lock in position, listen for both "clicks".
4. Put the discharged battery in the battery charger.
 - The battery only charges if the main switch is in position **1**.
 - The battery charger is on the left side of the electrical cabinet.
5. Start the remote control and make contact with the compact crane again.



The display on the battery charger gives information about the battery charger and the battery.



Left LED		Right LED	
Charger status & faults		Battery status	
Short green flash every 2 seconds	Power supply connected	Off	Battery not connected
Continuous red	Fault	Continuous green	Battery fully charged
		Flashing green	Charging
		Continuous red	Fault in the battery

6.

Care of the battery pack

6.1 Introduction

Do not open or disassemble the battery pack or the charger.

Charge the battery pack at the end of each day. This keeps it balanced and in a good condition.

Make sure that the emergency stop button is OUT.



Caution

Do not use the emergency stop button to stop the compact crane during normal operation.

ONLY use the emergency stop button in an emergency.

Reset the emergency stop button as soon as it is safe to do so.

If the compact crane's key switch is OFF, the battery pack will charge normally.

If the compact crane's key switch is ON:

- Most of the charge goes to operating the compact crane.
- The battery pack will continue to charge.
- Lower charging efficiency.
- Longer charging time.

Fully charge the battery once a week. This maximizes the battery's performance.

6.2 Charge indicator

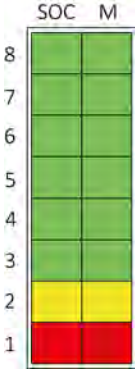
The C6e Gen 2 Compact crane has a charge indicator that shows the State Of Charge (SOC) and the charging mode (M) of the battery pack. The pictogram identifies the charge indicator.

The charge indicator is on the left in the body at the top of the undercarriage.

The charge indicator is ON when the charger is connected and / or when the compact crane is ON.

The state of charge is displayed on the left LED bar. The charging mode is shown on the right LED bar.



	<p>The following LEDs light up to indicate the corresponding state of charge (SOC):</p> <p>LED 8: 88%</p> <p>LED 7: 76%</p> <p>LED 6: 65%</p> <p>LED 5: 53%</p> <p>LED 4: 42%</p> <p>LED 3: 30%</p> <p>LED 2: 19%</p> <p>LED 1: 7%</p>
---	--

The following table shows the different modes:

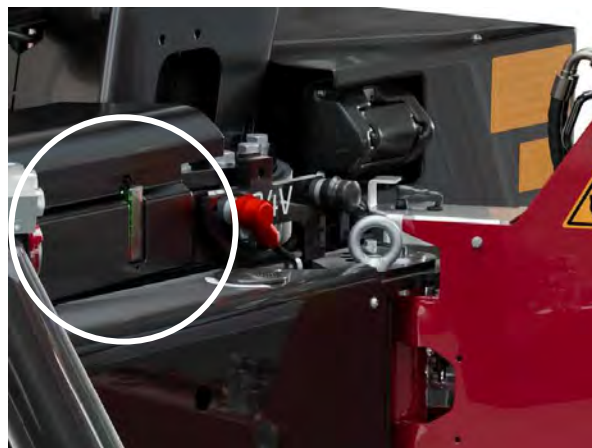
Charging mode indicator	Charging mode
The right column of the charge indicator fills every 4 seconds (fast)	Rapid charging (>2 A)
The right column of the charge indicator fills every 16 seconds (slow)	Balance charging: The voltages of the cells in the battery pack are equalized. This extends the life of the battery pack life and increases its capacity.
All the LED segments in both columns are on continuously.	The charging process is complete.

6.3 Charging the battery pack

1. Set the main switch on the electrical cabinet to position **0**.
2. Make sure that the charging cable plugs are clean and dry.
3. Connect the plug to the power grid.
 - Charging starts automatically.



4. During charging, the charge indicator fills up.
 - When the state of charge is above 88%, all LEDs in the SOC column are lit.
 - When the battery is fully charged, all the charging mode LEDs are continuously ON.



5. Disconnect the charging cable from the power grid when the battery is fully charged.
6. Let the power cable wind back into the electrical cabinet.

7.

Installation

7.1 Daily inspection (inspection before use)

1. Make sure that the compact crane is in transport position:
 - the outriggers are UP,
 - the jib is retracted and under the boom,
 - the boom is down,
 - the counterweight is retracted.
2. Make sure that the compact crane is OFF.
3. Remove the key.
4. Do a visual inspection of the compact crane. Make sure that:
 - there are no oil leaks,
 - there is enough oil in the hydraulic tank, fill if necessary, (see 9.6.2 Fill the oil tank).
 - there are no loose connections,
 - there is no damage,
 - all protective caps and covers are in position and installed correctly,
 - all nuts and bolts are in position and tight,
 - all pins are in position and installed correctly,
 - all loose parts are correctly secured.
5. Do a visual inspection of the tension and condition of the crawler tracks .
 - If the tension is not correct tighten or loosen the track (see 9.10.3 Tighten a crawler track) or (see 9.10.2 Loosen a crawler track)
 - Speak to your Hoeflon dealer if a track is damaged. Do not continue working.

6. Make sure that:
 - the lights on the sensors for the boom and jib go ON and OFF when you extend and retract the boom and the jib,
 - the control levers return to the center position automatically,
 - the manual outrigger controls are automatically locked,
 - the emergency stop button operates correctly,
 - the chains are not worn or damaged,
 - the lifting cable, hook and other lifting accessories are not worn or damaged,
 - all rotating and moving parts are not worn or damaged.
7. Speak to your Hoeflon dealer if you find any:
 - damage,
 - leaks,
 - worn parts,
 - broken parts.
8. Start the compact crane (see 7.2.1 Starting the compact crane).

7.2 Starting and stopping the compact crane

7.2.1 Starting the compact crane

1. Make sure that:
 - all emergency stop buttons are pulled out.
 - the charging cable is removed.
 - all levers of the remote control are in the center position. If one or more levers are not in the center position, the remote control cannot connect to the compact crane.
2. Set the key switch on the electrical cabinet to position **1**.
 - Set the crane to position **1** if you want to drive the crane or set the outriggers (undercarriage).
 - Set the main switch to position **2** if you want to set the counterweight or if you want to lift with the crane.

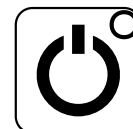


Note

If the key switch is set in position **1** you can switch between undercarriage and superstructure on the remote control.

If the key switch is set in position **2** you cannot switch with the remote control, you can only control the superstructure.

3. Start the remote control with the **On/off** button.



Note

The remote control automatically connects to the compact crane.

7.2.2 Stopping the compact crane



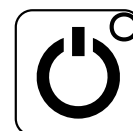
Caution

Do not use the emergency stop button to stop the compact crane during normal operation.

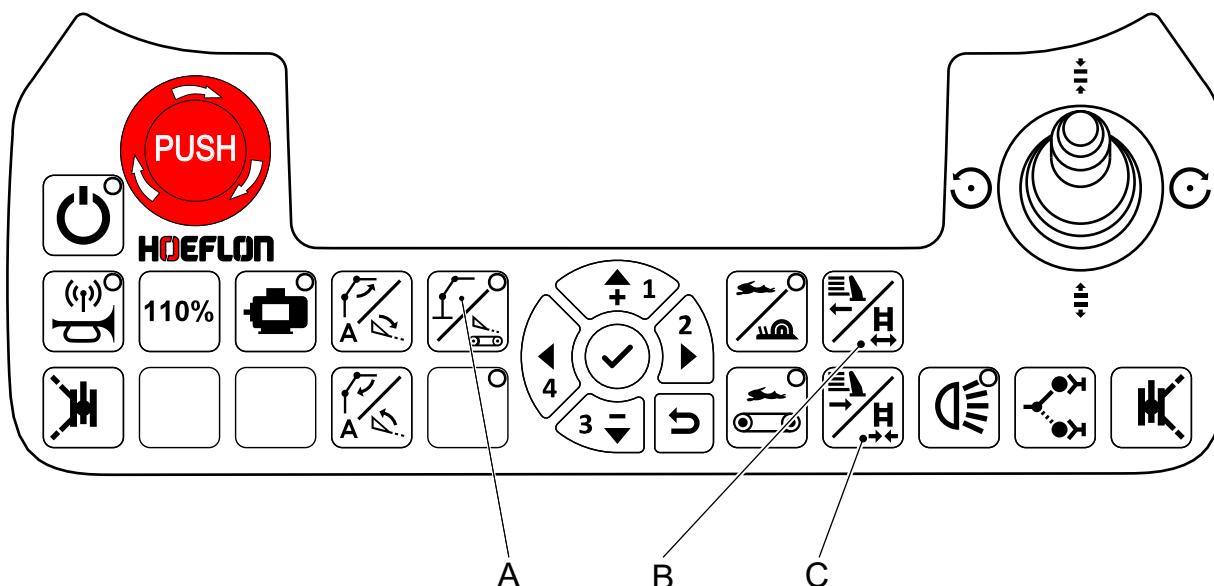
ONLY use the emergency stop button in an emergency.

Reset the emergency stop button as soon as it is safe to do so.

1. Make sure that the compact crane is in a safe and stable position.
2. Stop the remote control.
 - Use the On/Off button on the remote control.
3. Stop the compact crane.
4. Connect the compact crane to the mains supply if it is necessary to charge the batteries.



7.3 Setting the width of the crawler track



1. Make sure that the green LED on button **A** is OFF.
2. Push button **B Extend tracks/counterweight** on the remote control to extend the tracks.
3. Push button **C Retract tracks/counterweight** on the remote control to retract the tracks.

7.4 Moving the compact crane

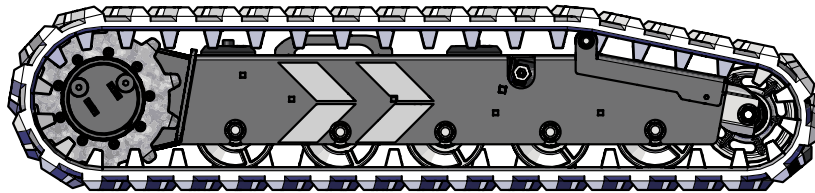
7.4.1 Using the controls



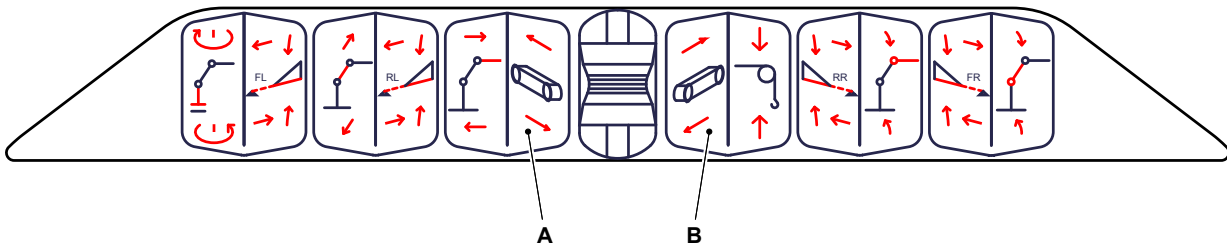
Caution

Always use maximum track width when you move the crane.

Only retract the tracks if it is really necessary.



1. Start the compact crane (see 7.2.1 Starting the compact crane).
2. Connect the remote control (see 5.5 Connect with the compact crane)
3. Make sure that:
 - the crane is folded in.
 - the counterweight is retracted.
 - the tracks are fully extended.
4. Select "Undercarriage control" (see 5.2.5 Undercarriage / Superstructure toggle button).



5. Operate levers A and B on the remote control simultaneously forwards or backwards to move in a straight line.
6. Operate one of the two levers to change direction.
7. Release the levers to stop the compact crane.
 - The levers return to the center position automatically.

7.4.2 Maximum slope angles when moving an unloaded compact crane



Caution

The values that are given in the table are for an unloaded compact crane only.

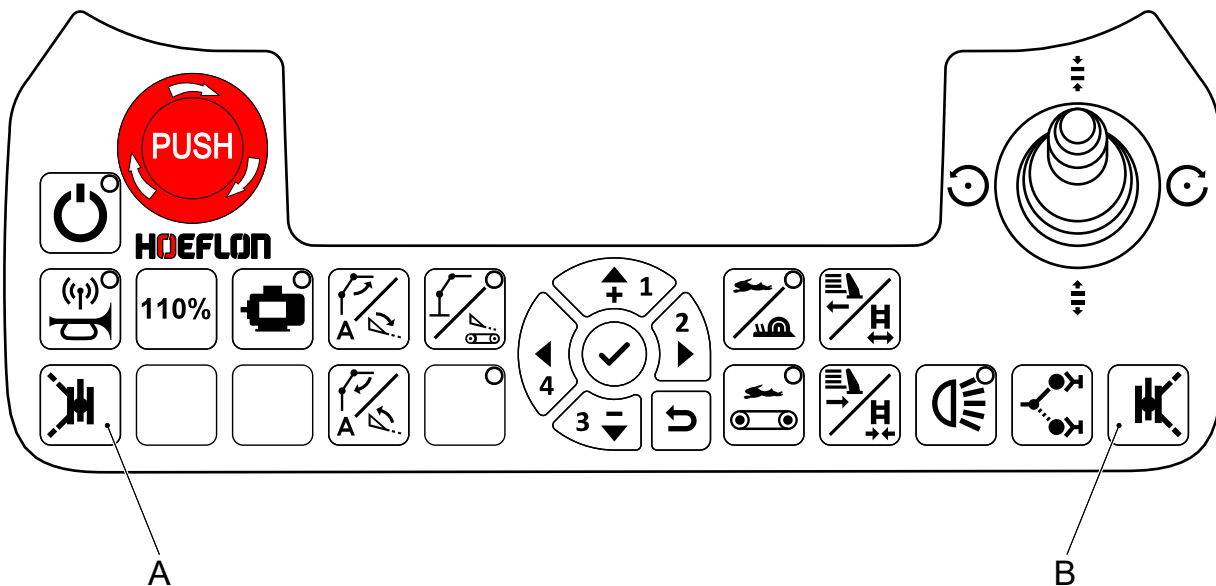
Direction of movement	Maximum slope angle
Forwards	15°
Backwards	23°
Sideways – crawler tracks retracted	15°
Sideways – crawler tracks extended	23°

7.5 Setting the outriggers

7.5.1 Preparation

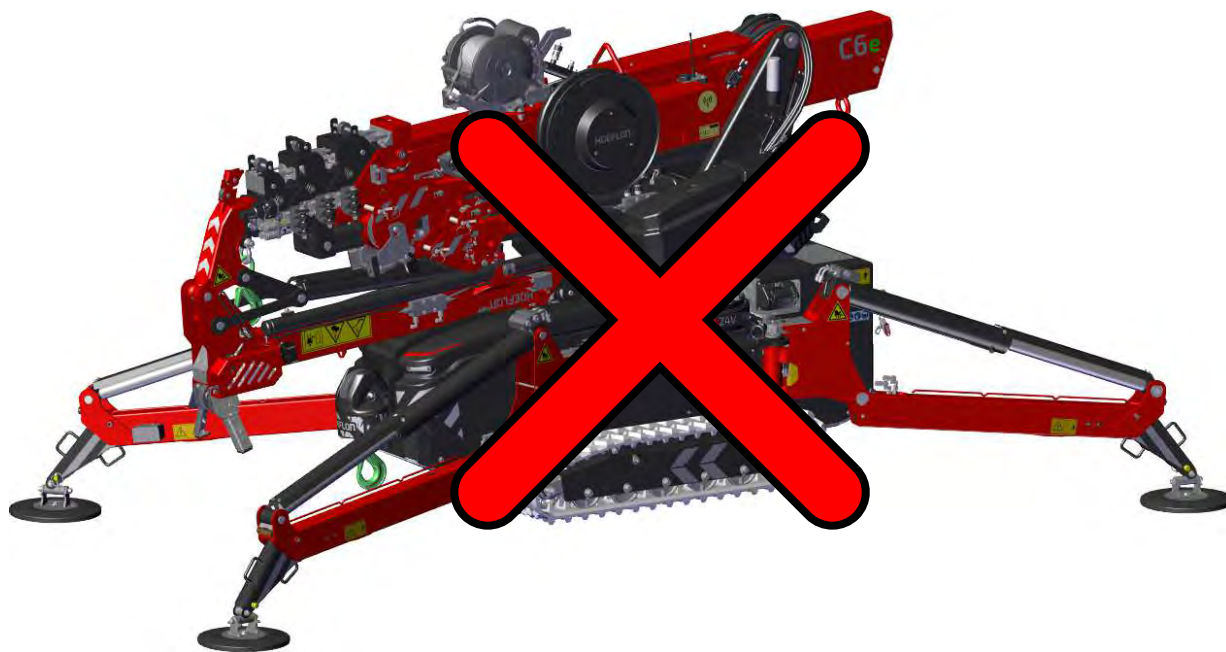
1. Do an inspection of the ground near the crane, Make sure that:
 - the ground is even,
 - there is no loose material or rocks,
 - the ground does not slope,
 - there are no other issues may affect the stability of the crane.
2. Start the crane, (see 7.2.1 Starting the compact crane)
3. Connect to the remote control (see 5.5 Connect with the compact crane)
4. Make sure that:
 - the crane is folded in,
 - that the counterweight is retracted,
 - the outriggers are UP.
 - The undercarriage is active (see 5.2.5 Undercarriage / Superstructure toggle button).

7.5.2 How to set the outriggers manually



Note

If possible, turn each outrigger to 47° (look at the display). This gives maximum stability and support.



Danger

Do not put the two outriggers on the same side of the crane in line with the crane (< 5°).
The crane will topple very easily.

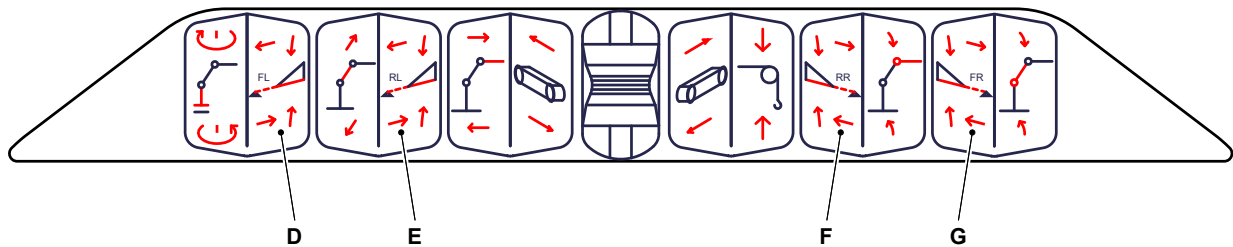
1. Make sure that each outrigger angle is the same as the angel that is displayed on the remote control.

2. Turn the foot so that it is loose.



Note

The foot automatically unlocks.



3. Lower the outriggers with the levers of the remote control until each outrigger is horizontal (see 5.3 Levers).
4. Lower each outrigger until it is immediately above the ground. Monitor the outrigger.
 - Only use the lever to lower an outrigger.
5. Operate the two outriggers at the front until the front of the crane is immediately above the ground.
6. Operate the two outriggers at the rear until the rear of the crane is immediately above the ground.
7. Operate the outriggers independently to make the crane level.
8. Do not lift the crane higher on the outriggers than necessary; it is sufficient when the crawler tracks do not touch the ground.



Note

Look at the spirit level on the crane. The bubble must be in the middle of the circle.

9. Make sure that all the outriggers fully rest on the ground after they have been set.

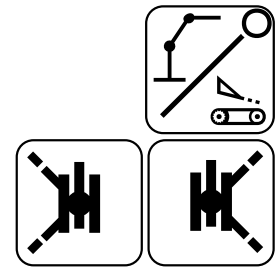


Caution

Make sure that the counterweight does not touch an outrigger when you turn the superstructure.

7.5.3 How to set the outriggers automatically

1. Make sure that the undercarriage is active. The LED is OFF.
2. Unlock the outrigger legs with the **Release the outrigger leg** button.
3. Turn the outrigger legs in position.



Note

The angle of the outrigger legs must be between 25° and 65°.

A message is displayed if the outrigger legs are not positioned correctly.

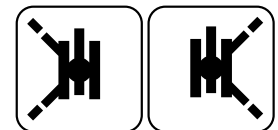
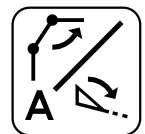
4. Turn the foot so that it is loose.



Note

The foot automatically unlocks.

5. Push and hold the button to automatically deploy the outriggers.
6. While the button is pushed, the outriggers are lowered at normal speed.
7. Push and hold the **Automatic deploy** button AND the **Release the outrigger leg** button if you want to extend the outriggers.

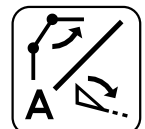


Note

The left **Release the outrigger leg** button extends the left side.

The right **Release the outrigger leg** button extends the right side.

8. Extend the outriggers before they touch the ground.
9. Make sure that each outrigger is in the correct position.
10. Push and hold the button again to fully lower the outriggers.

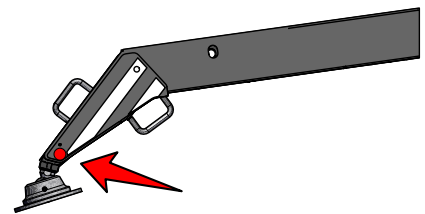


11. When all outriggers touch the ground the crane:
 - will slowly lift itself off the ground
 - will level itself.
12. When the crane is level and fully off the ground :
 - the horn sounds.
 - the crane stops moving.
13. Push and hold the button if you want to raise the crane more.

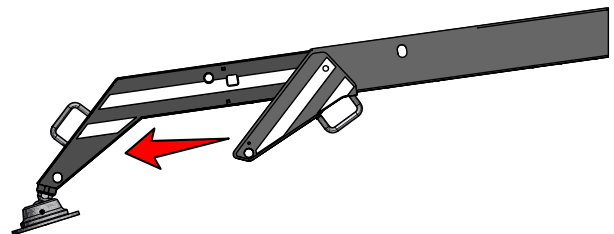


7.6 Using the outrigger extensions

1. Remove the clip and the locking pin.

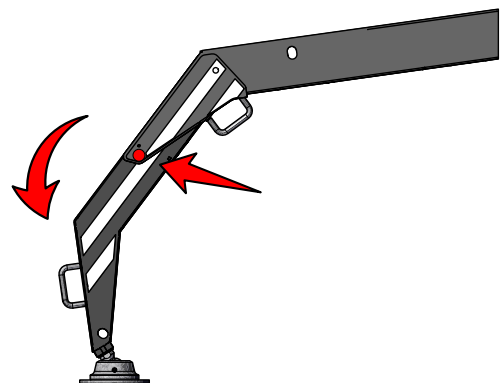


2. Pull the extension out to the end stop.



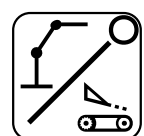
3. Lower the extension.

4. Insert the locking pin and the clip

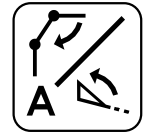


7.6.1 Retracting the outriggers automatically

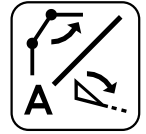
1. Make sure that the undercarriage is active. The LED is OFF.



2. Push and hold the RETRACT button to automatically lower the crane.

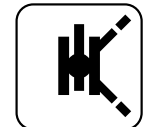
**Note**

Press and hold the DEPLOY button If you want to raise the crane again.

**Note**

The crane will try to stay horizontal.

3. While the button is pushed, the crane slowly lowers until the tracks are fully on the ground.
4. The crane continues to slowly lift the outriggers until all four outriggers are fully off the ground.
 - When an outrigger is off the ground it stops moving until all outriggers are fully off the ground.
 - The outriggers now raise at normal speed.
5. When all the outriggers are fully off the ground:
 - Turn and lock the outrigger feet.
 - Push and hold the button to fully raise and retract the four outriggers.



7.7 Setting the counterweight

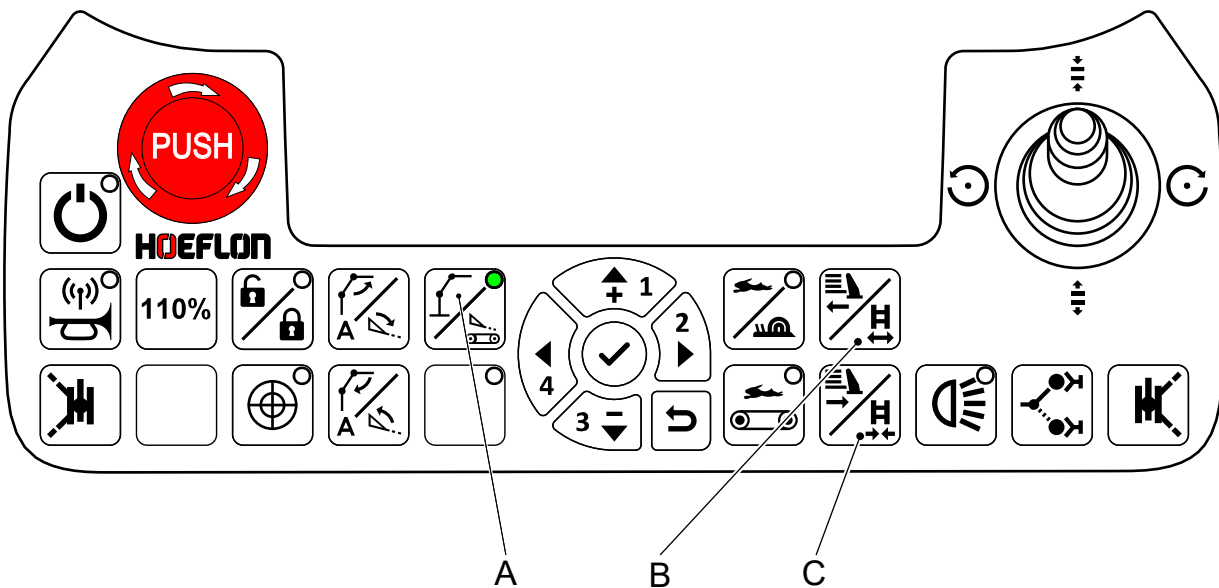
7.7.1 Preparation

1. Start the crane, (see 7.2.1 Starting the compact crane)
2. Connect to the remote control (see 5.5 Connect with the compact crane)
3. Lift the crane on the outriggers, (see 7.5.2 How to set the outriggers manually).

**Caution**

Make sure that the counterweight will not touch the outriggers when it is extended.

7.7.2 How to set the counterweight



Extending the counterweight



Caution

Lower the outriggers before extending the counterweight, (see 7.5 Setting the outriggers).

1. Make sure that the green LED on button **A** is ON (superstructure).
2. Push button **B Extend tracks / counterweight** on the remote control to extend the counterweight.

Retracting the counterweight

1. Make sure that the green LED on button **A** is ON (superstructure).
2. Push button **C Retract tracks / counterweight** on the remote control to retract the counterweight.
3. Make sure that the counterweight fully moves into the holding brackets on the column.

7.7.3 Operate the counterweight while driving



Warning

Only extend or retract the counterweight while driving to adjust the center of gravity.

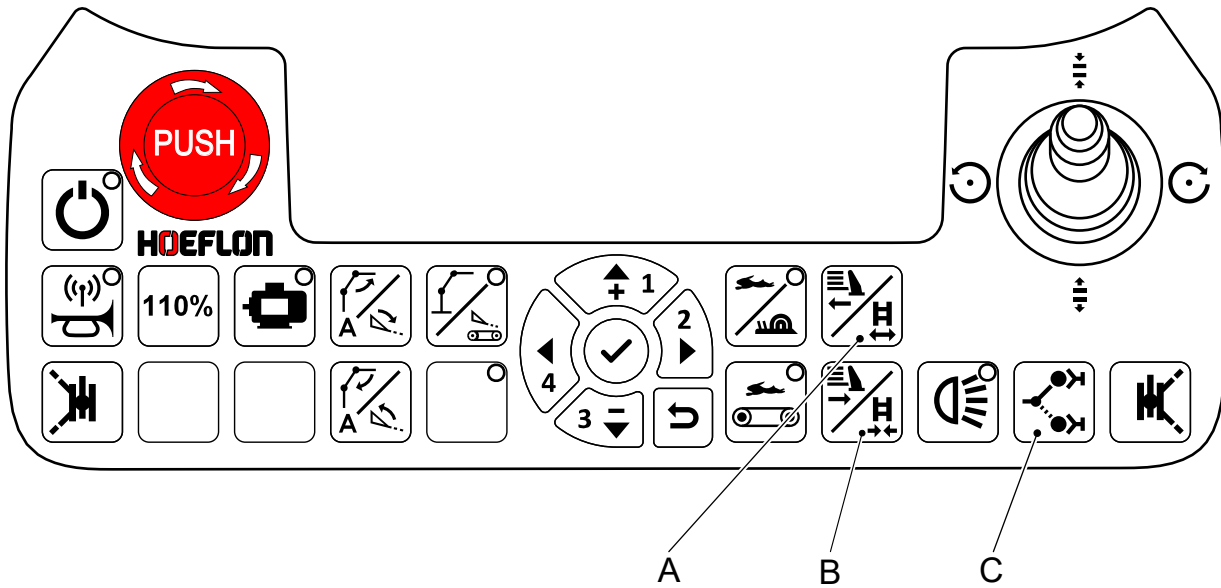
Use this to adapt to changing driving conditions (slopes, slippery or wet surfaces).



Caution

Make sure that you do not damage the outriggers when you operate the counterweight.

If you are driving the crane and the crane is not stable then you can extend the counterweight without stopping.



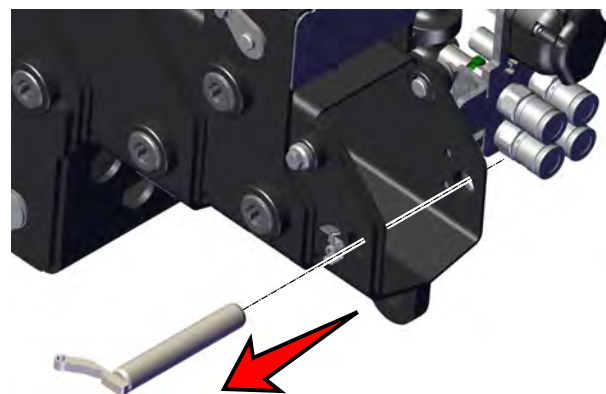
Push button A and C at the same time to extend the counterweight.

Push button B and C at the same time to retract the counterweight.

7.8 The jib

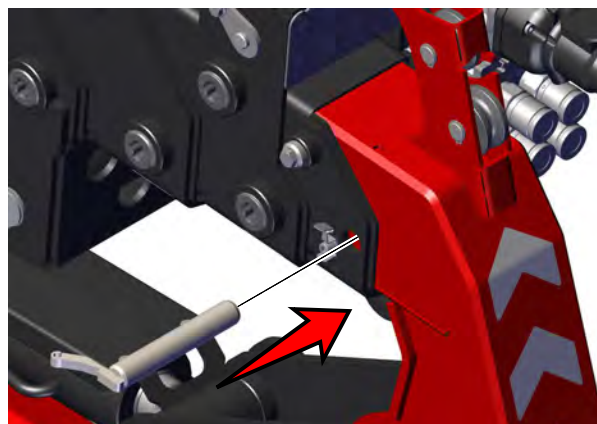
7.8.1 Installing the jib

1. Fully retract the boom.
2. Align the crane with the jib.
3. Raise the crane on the outriggers.
4. Adjust the crane with the outriggers so that the boom points towards the connection plate on the jib.
5. Remove the pin from the end of the boom.





6. Slowly extend the boom until the end of the boom almost touches the quick connect of the jib.
7. Connect the hydraulic hoses and the power plug.
 - Use the color coding on the hoses when you connect the hoses.
 - You can move the quick connect of the jib with a small amount if it does not fully align with the boom.
8. Extend the boom so that the quick connect of the jib fully engages in the boom.
9. Attach the jib to the boom with the pin.
10. Turn the pin to lock it.
11. Slowly move the boom UP.
 - Make sure that the jib doesn't fall.
 - Make sure that the hoses or the cable don't catch.
12. Lift the jib of the ground.



7.8.2 Removing the Jib



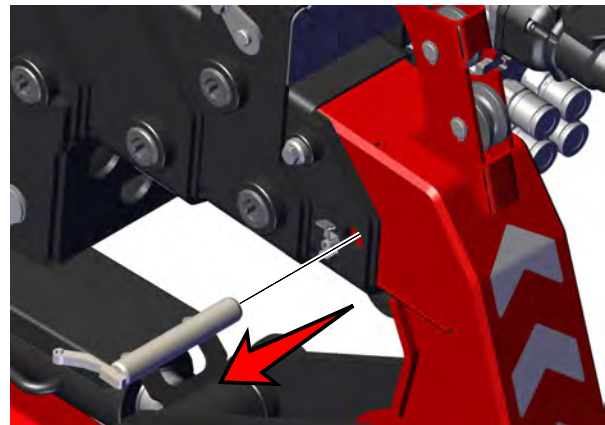
1. Move the jib into its transport position.
2. Extend the boom and adjust the crane with the outriggers so that the jib is put on the ground.

**Note**

Put the jib on the two supports.

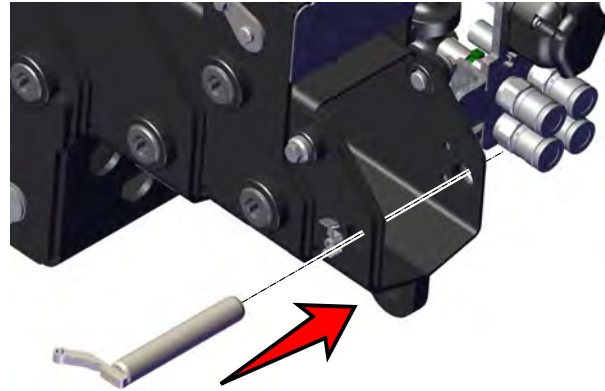


3. Slowly move the boom DOWN.
 - Make sure that the jib doesn't fall.
 - Make sure that the hoses or the cable don't catch.
4. Disconnect the hydraulic hoses and the power plug.
5. Move the hydraulic hoses and the power cable to a safe position.
6. Remove the pin from the end of the boom.



7. Fully retract the boom.

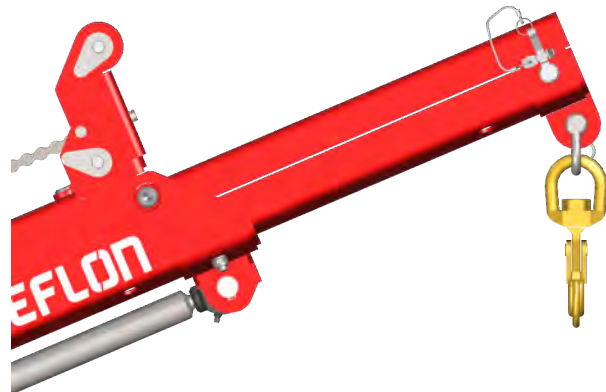
8. Insert the pin into the end of the boom.
9. Turn the pin to lock it.



7.9 Attaching an attachment

7.9.1 Hook

Use a shackle to attach the hook to the boom or searcher hook.



Caution

Make sure that the shackle is correctly rated.

7.9.2 Lifting adapter

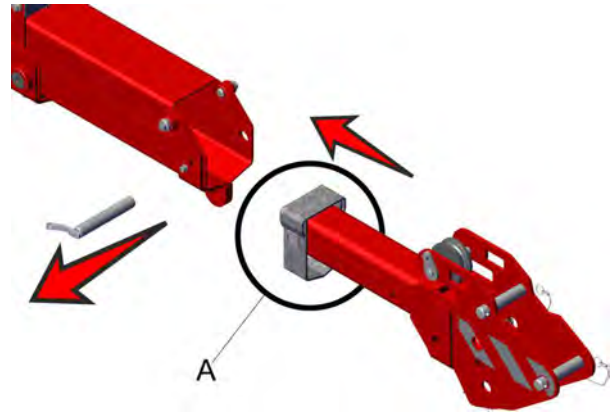
Install the lifting adapter in the end of the boom.



Note

Use the metal spacer (A) when you install the lifting adapter in the boom.

1. Turn and remove the locking pin from the boom.
2. Fully insert the lifting adapter.
 - Make sure that the holes align.
3. Put the locking pin back and turn it into the clip.
 - Make sure that it fully engages in the clip.



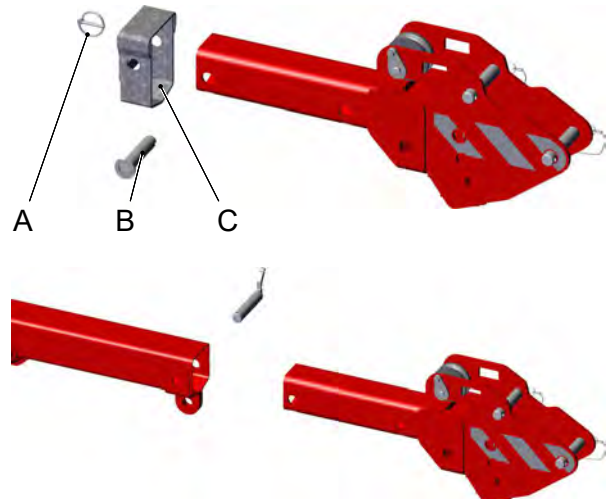
Install the lifting adapter in the end of the jib.



Note

DO NOT use the metal spacer (A) when you install the lifting adapter in the jib.

1. Remove the clip (A) and the pin (B).
2. Remove the metal spacer.
3. Put the pin in the spacer and insert the clip.
4. Put the metal spacer with the pin and the clip in a safe place.
5. Turn and remove the locking pin from the jib.
6. Fully insert the lifting adapter.
 - Make sure that the holes align.
7. Put the locking pin back and turn it into the clip.
 - Make sure that it fully engages in the clip.



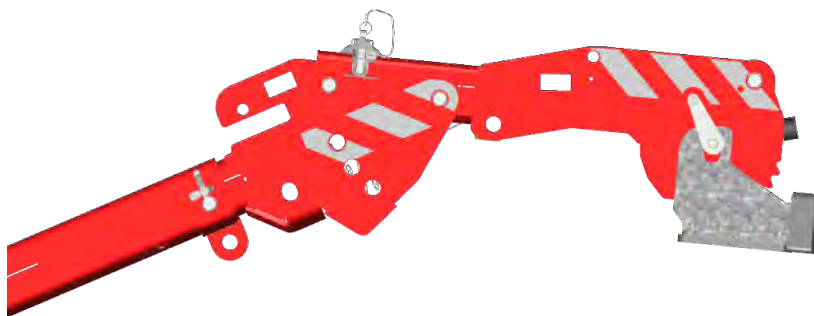
7.9.3 Searcher hook



Attach the searcher hook to the lifting adapter.

1. Unlock and remove the two pins.
2. Move the searcher hook into the lifting adapter.
 - Make sure that the searcher hook is turned to the correct angle.
3. Insert the two pins and lock them.

7.9.4 Winch head



Attach the winch head to the lifting adapter.

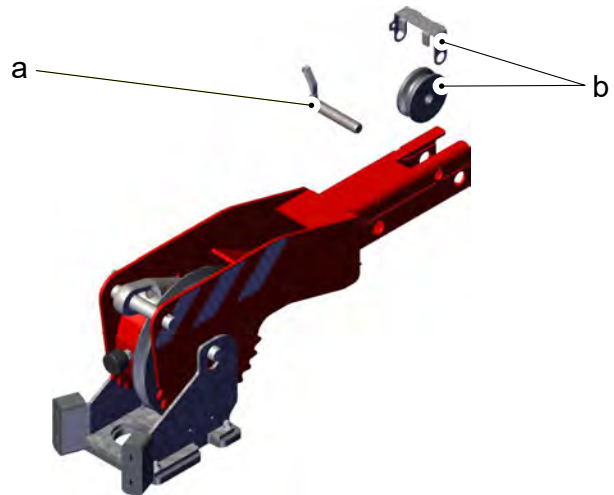
1. Unlock and remove the two pins.
2. Move the winch head into the lifting adapter.
 - Make sure that the winch head is turned to the correct angle.
3. Insert the two pins and lock them.

**Note**

In this description the winch head is installed at an angle of -30° .

If it is necessary to install the winch head with a different angle (0° , 15° or 30°) then you must remove the roll which is identified by the arrow.

- a. Unlock and remove the pin.
- b. Remove the roll and the bracket.
- c. Put the roll, the pin and the bracket in the storage compartment.
- d. Attach the winch head to the lifting adapter as specified above.



7.10 Prepare the crane for use with the winch

**Caution**

Do not use the winch without the hook block.

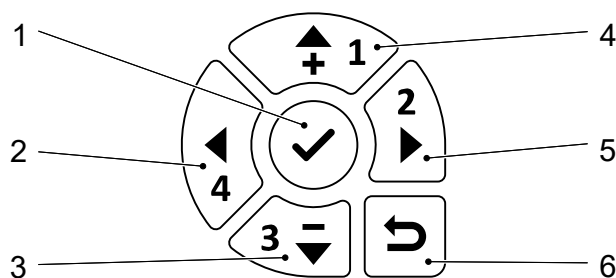
If you do not use a hook block the cable will not wind correctly and will tangle.

**Note**

Reeve the lifting cable if the mass of the load exceeds the capacity of the winch.

- Use one sheave in the hook block for 2 x reeving,
- Use two sheaves in the hook block for 4 x reeving.

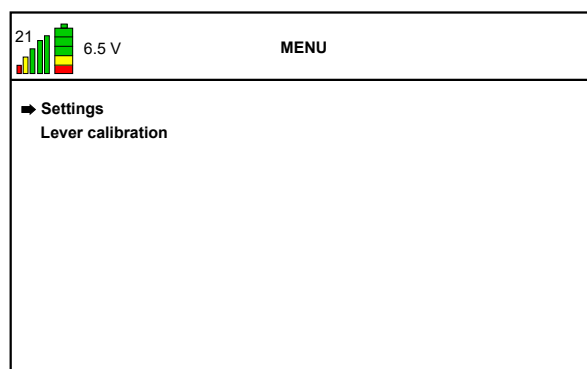
7.10.1 Identify the winch



- | | |
|---------------------------|----------------------------|
| 1. Confirm / go into menu | 4. Up |
| 2. Left | 5. Right |
| 3. Down | 6. Return to previous menu |

1. Start the remote control.
2. Push the **Confirm** button (1) to go into the *remote control menu*.
3. Make sure that the arrow in the display points to *Settings*.

- Push the **Up arrow** (4) or the **Down arrow** (3) to move the arrow in the display until it points to *Settings*.



4. Push the **Confirm** button (1) to go into the *Settings* menu.
5. Make sure that the arrow in the display is next to the *Winch state* menu.
 - Push the **Up arrow** (3) or the **Down arrow** (4) to move the arrow in the display until it points to *Winch state*.
6. Select the winch state that you want.



Caution

Do not use the winch without the hook block.

If you do not use a hook block the cable will not wind correctly and will tangle.

7. Push the **Back button** (6) two times to go back to the *Settings* menu.
8. The winch is now identified.

7.10.2 Move the winch cable in position

1. Set the remote control to use the winch (see 7.10.1 Identify the winch).
2. Use the "winch lever" to unwind the winch.
3. Pull the cable while slowly unwinding the cable at the same time



Caution

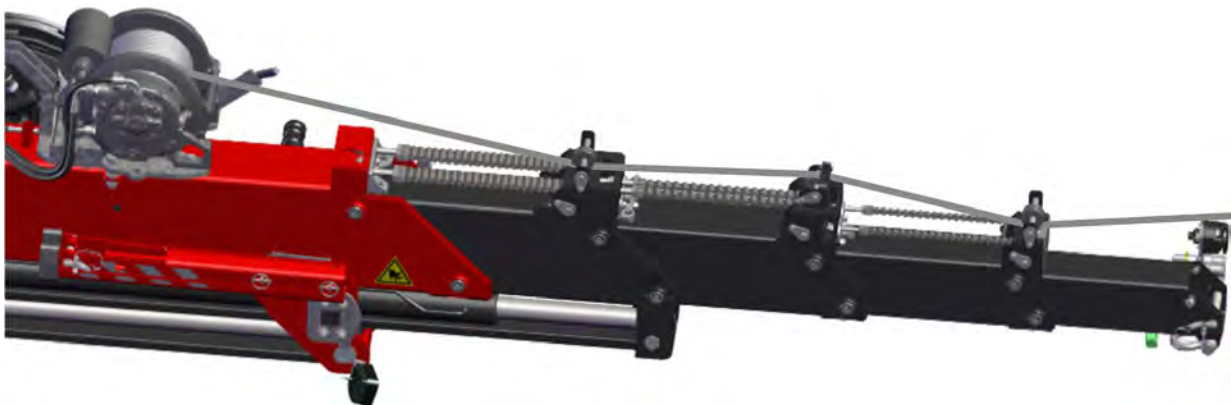
Make sure that there is ALWAYS tension in the winch cable.

Pull the cable tight with your hand when you wind or unwind the cable.



Caution

Be very careful that your hand does not get caught when you wind or unwind the cable.



Pull the cable through the guides in the boom.

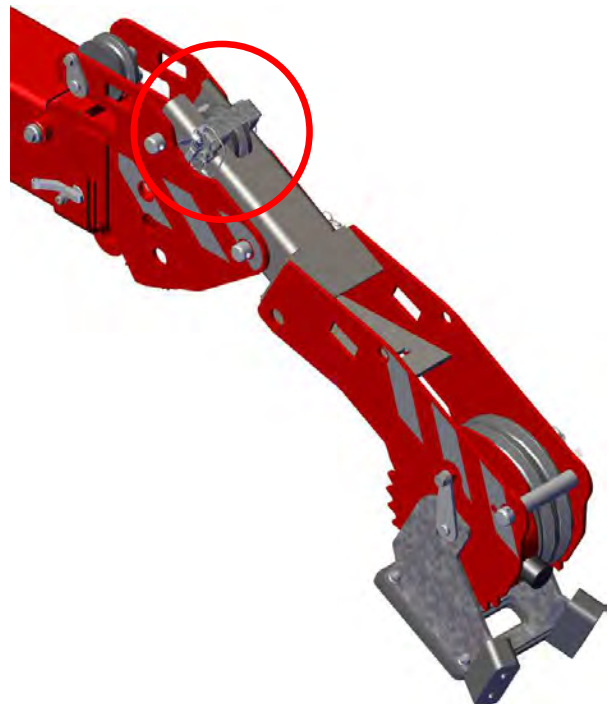
1. Under the first roll,
 - a. Put the cable into the slot.
 - b. Move the roll over the slot.
 - c. Move the cable UP and into the roll.
 - d. Move the roll back to the center.
2. Over the second roll
 - a. Move the cable through the slot in the bracket.
 - b. Move the roll under the slot.
 - c. Move the cable into the roll.
 - d. Move the roll back to the center

3. Over the last roll, move the cable through the slot in the bracket first.
 - a. Put the cable into the slot.
 - b. Move the roll over the slot.
 - c. Move the cable UP and into the roll.
 - d. Move the roll back to the center.

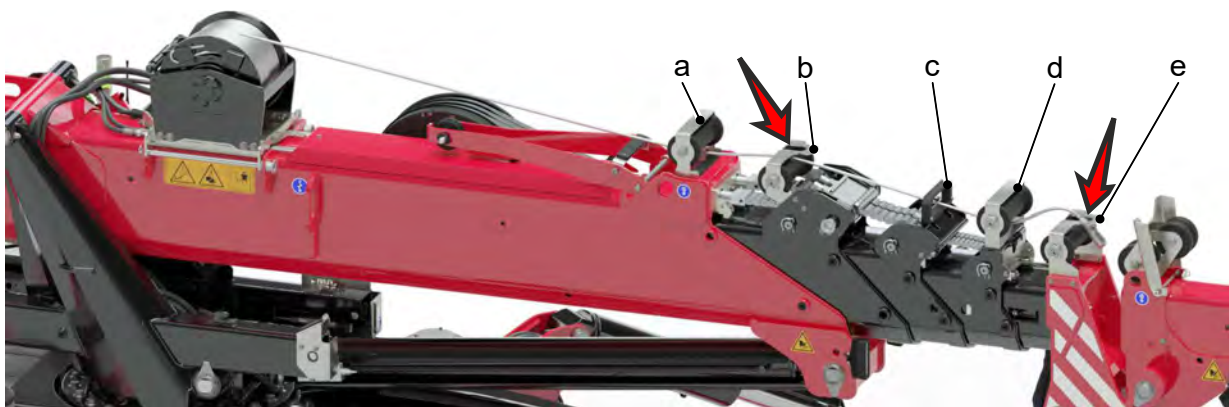
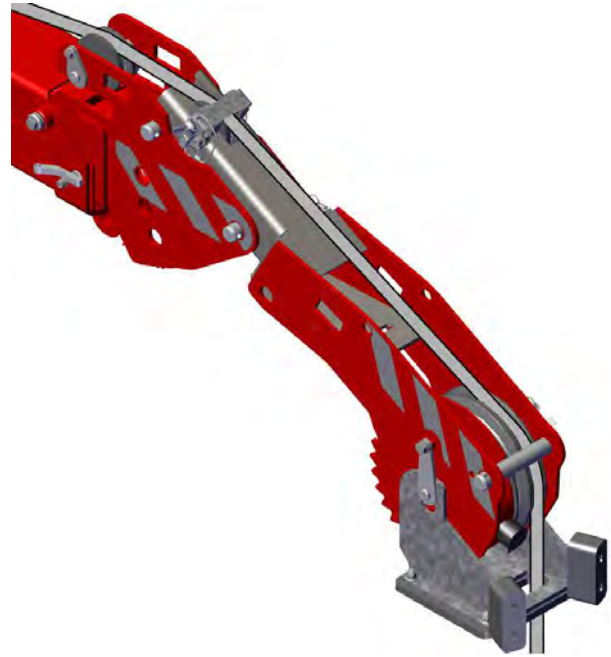
7.10.3 Move the cable onto the jib



1. Pull the cable through the front bracket on the jib.
2. If you have the lifting adapter set at -30° .
 1. Remove the pin and the bracket.
 2. Move the winch cable over the roll.
 3. Put the pins and the bracket back in position.



3. Remove the pins and move the cable over roll in the winch head.
4. Put the pin back in position.
5. Put the cable over the left sheave (if you look forward).
6. You can now use the winch without reeving.

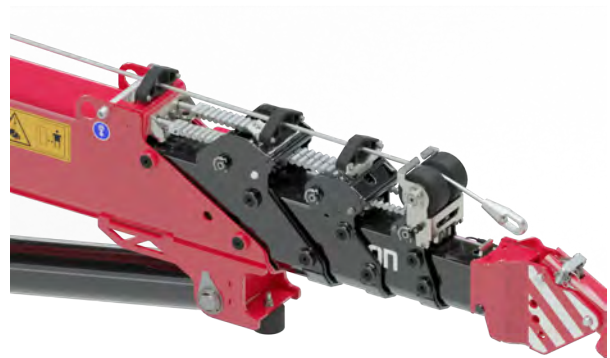


1. Pull the cable over the lifting bar of the counterweight.
2. Pull the cable through the guides in the boom.
 - a. Under the first roll,
 - b. Over the second roll, move the cable through the slot in the bracket first,
 - c. Through the bracket
 - d. Under the fourth roll
 - e. Over the last roll, move the cable through the slot in the bracket first.

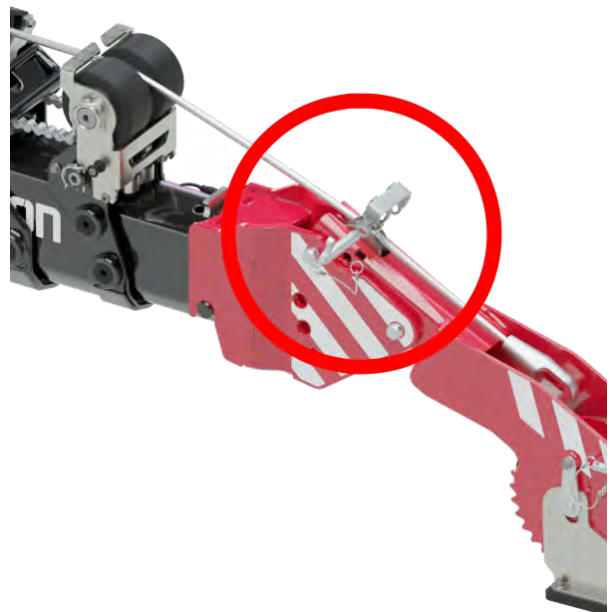
3. Pull the cable through the rolls in the jib.



4. Pull the cable through the brackets on the jib.
5. Move the cable over the roll at the end of the jib.



6. If you have the lifting adapter set at -30°.
 1. Remove the pin and the bracket.
 2. Move the winch cable over the roll.
 3. Put the pins and the bracket back in position.



7. Remove the pins and move the cable over roll in the winch head.
8. Put the pin back in position.
9. You can now use the winch without reeving.



7.10.4 Attaching the hook block

1. Prepare the crane (see 7.10 Prepare the crane for use with the winch).
2. Set the remote control to use the winch (see 7.10.1 Identify the winch).
 - Set the *Winch reeving factor* to 1.
3. Move the winch cable in position (see 7.10.2 Move the winch cable in position).
4. Pull the cable while slowly unwinding the cable at the same time.

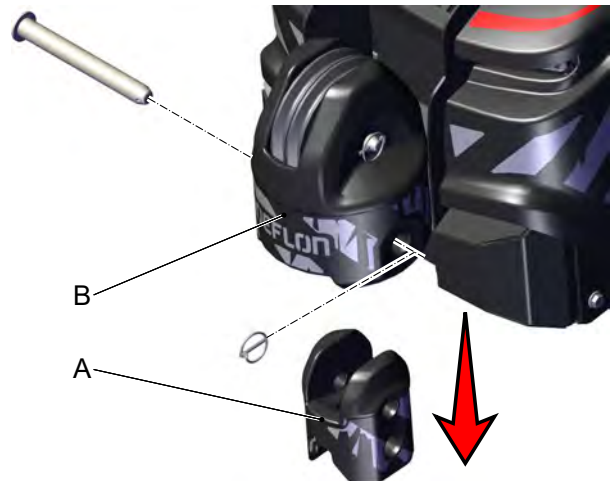
**Note**

Make sure that there is always tension in the winch cable. If you don't then the cable will tangle,

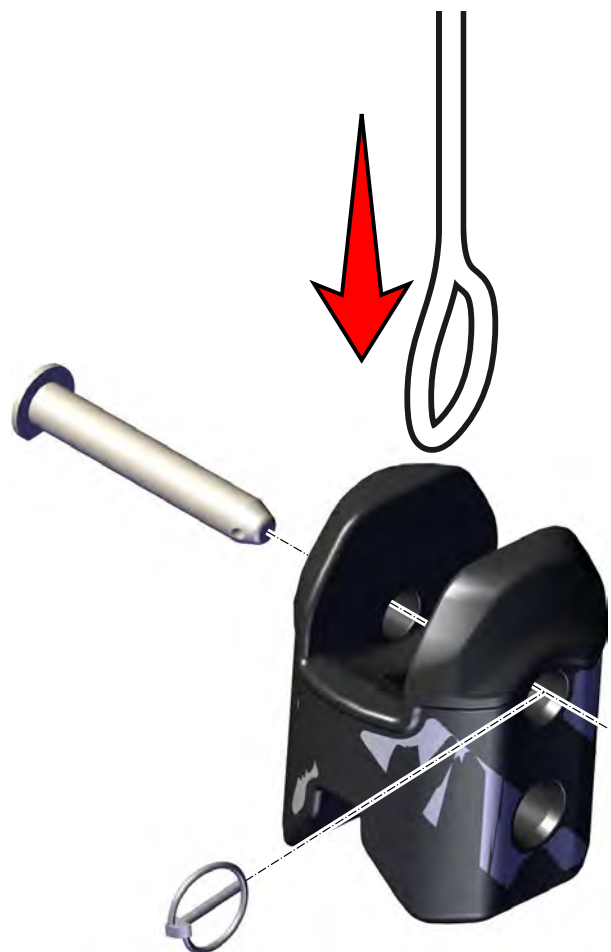
**Caution**

Use thick gloves when you pull the winch cable.

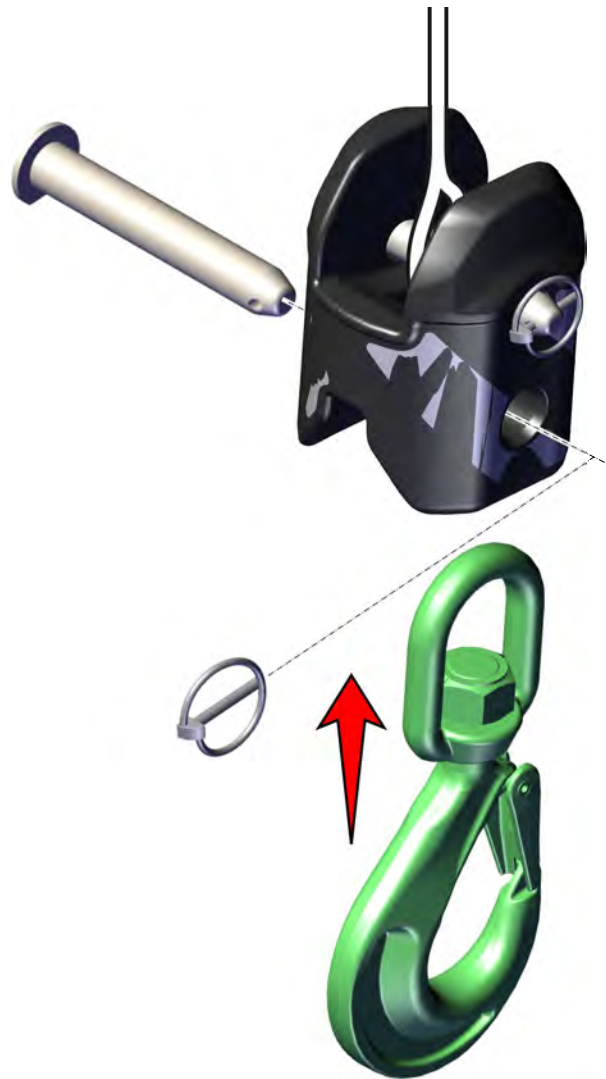
5. Make sure that the hook block cannot fall.
6. Remove the clip.
7. Pull the pin out.
8. Lower the hook block (A) from the winch block (B).
9. Put the hook block on the ground.



10. Move the cable into the hook block.
11. Align the eye in the cable top hole in the hook block.
12. Push the small shaft back into the top hole in the hook block and through the eye of the cable.
13. Safety the shaft with the clip.



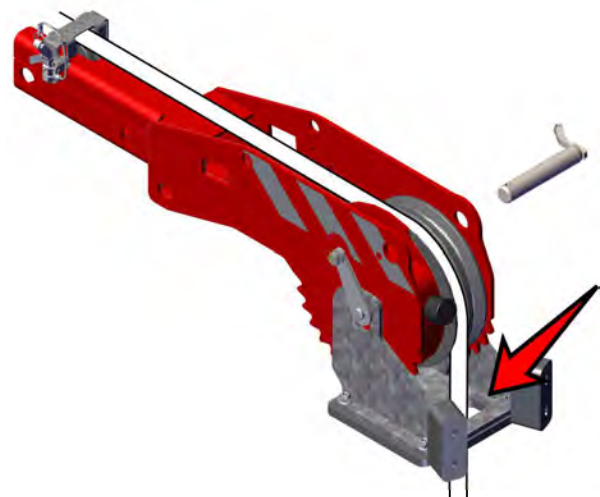
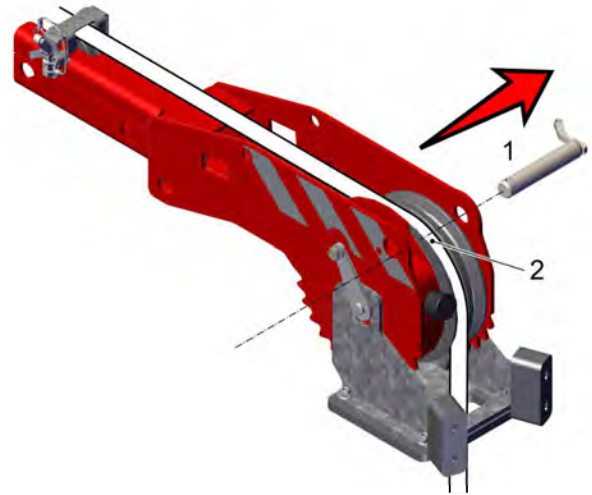
14. Get the shaft from the storage bin in the counterweight.
15. Move the hook into the hook block.
16. Align the eye of the hook with the bottom hole in the hook block.
17. Push the small shaft into the bottom hole in the hook block and through the eye of the hook.
18. Safety the shaft with the clip.



7.11 Reeving (2x) with the winch head

7.11.1 Connect the winch cable to the winch head

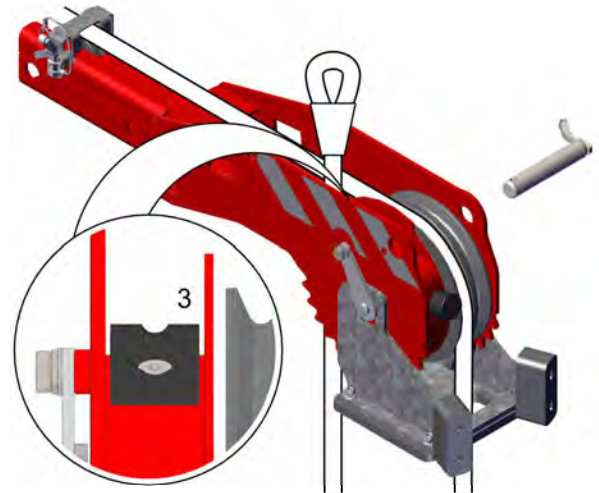
1. Prepare the crane (see 7.10 Prepare the crane for use with the winch).
2. Set the remote control to use the winch (see 7.10.1 Identify the winch).
3. Set the *Winch reeving factor* to 2.
4. Move the winch cable in position (see 7.10.2 Move the winch cable in position).
5. Remove the pin (1).
6. Pull the winch cable out.
7. Move the cable through the hole in the winch stop.
8. Hang the cable in a loop.



Note

Make sure that the loop is long enough to go around the sheave in the hook block.

- Put the cable over the wear plate (3).

**Note**

Align the eye in the cable with the hole that the pin goes through.

- Push the pin back into the winch head and through the eye of the cable.
- Safety the pin with the clip.

7.11.2 Attaching the hook block with 2 x reeving

- Prepare the crane (see 7.10 Prepare the crane for use with the winch).
- Set the remote control to use the winch (see 7.10.1 Identify the winch).
 - Set the *Winch reeving factor* to 2.
- Move the winch cable in position (see 7.10.2 Move the winch cable in position).
- Pull the cable while slowly unwinding the cable at the same time

**Note**

Make sure that there is always tension in the winch cable. If you don't then the cable will tangle,

**Caution**

Use thick gloves when you pull the winch cable.

5. Remove the two sheaves from the winch block if required.
6. Remove:
 - the clip.
 - the shaft.
 - (the two winch sheaves).



Note

Put the two cable sheaves in a safe place.

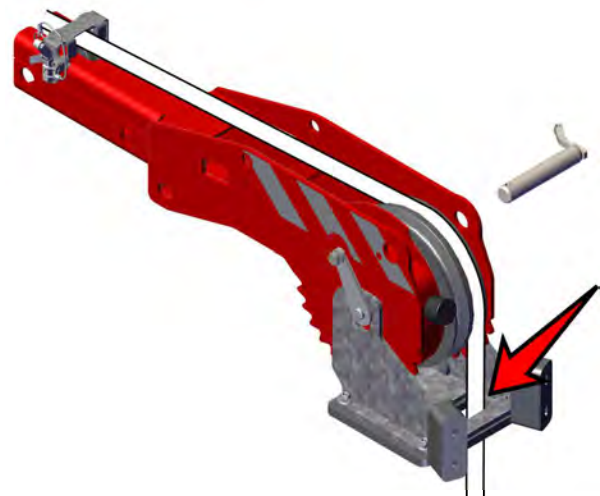
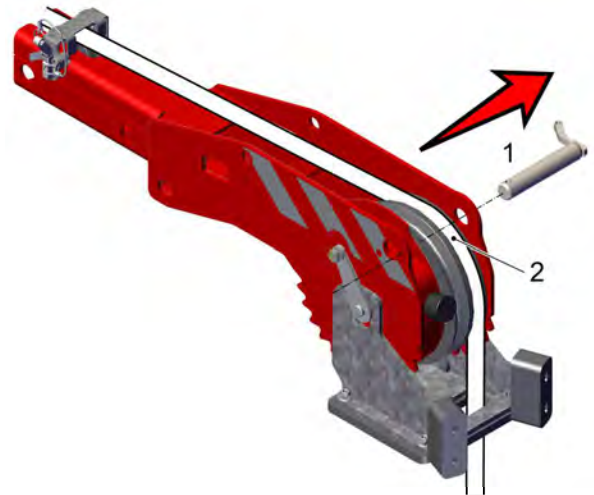
7. Put the winch cable around the single wide sheave.
8. Put the sheave with the winch cable back into the winch block.
9. Install the shaft and the clip.
10. Use the remote control and lift the winch block out of its storage position.



7.12 Reeving (4x) with the winch head

7.12.1 Connect the winch cable to the winch head

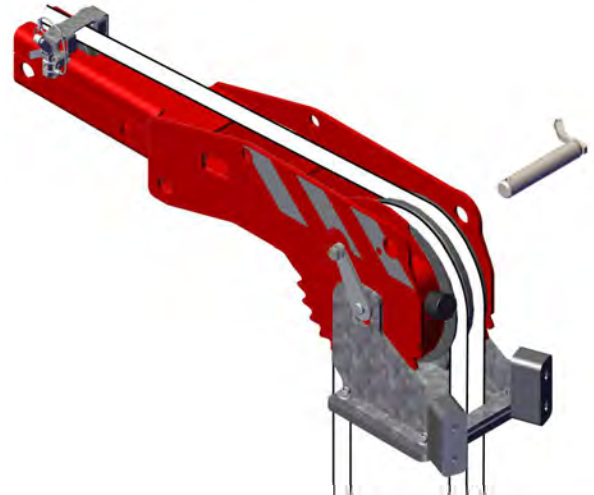
1. Prepare the crane (see 7.10 Prepare the crane for use with the winch).
2. Set the remote control to use the winch (see 7.10.1 Identify the winch).
3. Set the *Winch reeving factor* to 4.
4. Move the winch cable in position (see 7.10.2 Move the winch cable in position).
5. Remove the pin (1).
6. Pull the winch cable out.
7. Put the winch cable over the OUTER cable sheave (2).
8. Move the cable through the hole in the winch stop.
9. Hang the cable in a loop.



Note

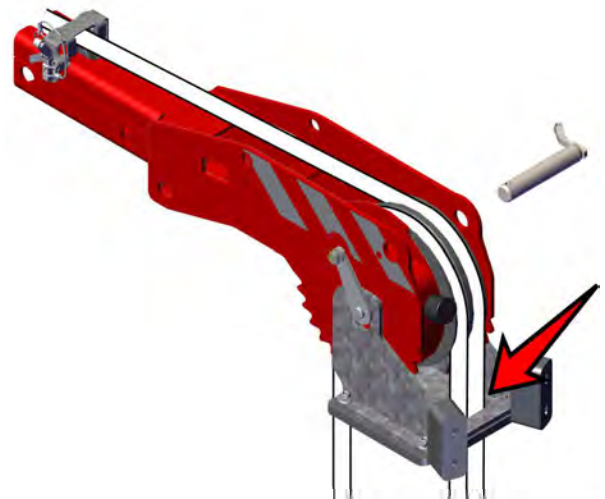
Make sure that the loop is long enough to go around the sheave in the hook block.

10. Put the winch cable over the INNER cable sheave.



11. Move the cable through the hole in the winch stop.

12. Hang the cable in a loop.



Note

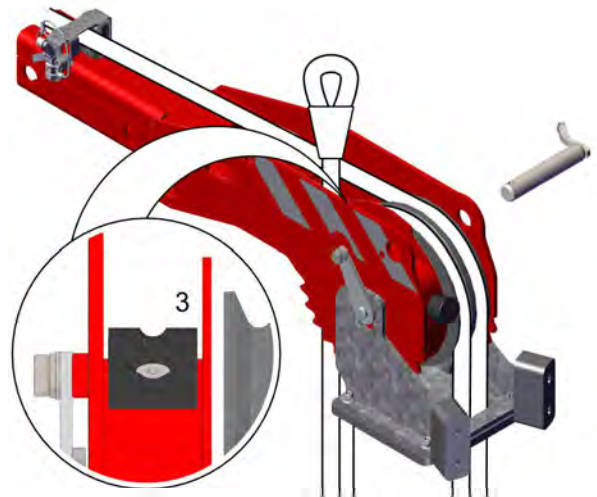
Make sure that the loops are an equal length.



Note

Make sure that the loop is long enough to go around the sheave in the hook block.

13. Put the cable over the wear plate (3).



**Note**

Align the eye in the cable with the hole that the pin goes through.

14. Push the pin back into the winch head and through the eye of the cable.
15. Safety the pin with the clip.

7.12.2 Attaching the hook block with 4 x reeving

1. Prepare the crane (see 7.10 Prepare the crane for use with the winch).
2. Set the remote control to use the winch (see 7.10.1 Identify the winch).
 - Set the *Winch reeving factor* to 2.
3. Move the winch cable in position (see 7.10.2 Move the winch cable in position).
4. Pull the cable while slowly unwinding the cable at the same time

**Note**

Make sure that there is always tension in the winch cable. If you don't then the cable will tangle,

**Caution**

Use thick gloves when you pull the winch cable.

5. Remove the single wide sheave from the winch block if required.
6. Remove:
 - the clip.
 - the shaft.
 - (the single wide sheave).



**Note**

Put the single wide sheave in a safe place.

7. Put the winch cable around the two cable sheaves.
8. Put the cable sheaves with the winch cable back into the winch block.
9. Install the shaft and the clip.
10. Use the remote control and lift the winch block out of its storage position.



7.12.3 Install tow hook

1. Prepare the crane (see 7.10 Prepare the crane for use with the winch).
2. Set the remote control to use the winch (see 7.10.1 Identify the winch).
 - Set the *Winch reeving factor* to 1.
3. Move the winch cable in position (see 7.10.2 Move the winch cable in position).
4. Pull the cable while slowly unwinding the cable at the same time.

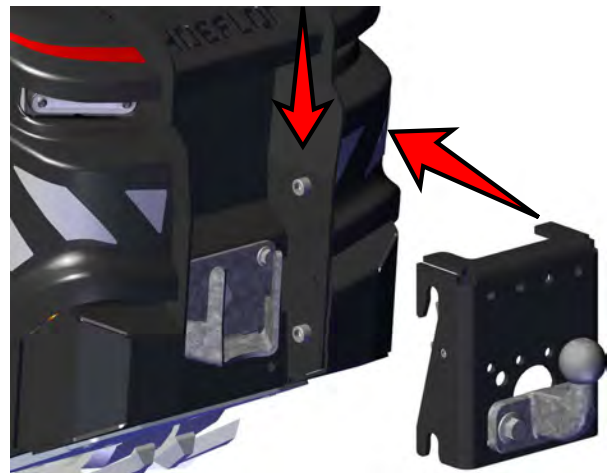
**Note**

Make sure that there is always tension in the winch cable. If you don't then the cable will tangle,

**Caution**

Use thick gloves when you pull the winch cable.

5. Remove the clip and the shaft.
6. Move the winch cable into the winch block.
7. Align the eye in the cable top hole in the hook block.
8. Push the shaft back into the top hole in the winch block and through the eye of the cable.
9. Safety the shaft with the clip.
10. Use the winch to lift the winch block out of its storage position.
11. Put the winch block in a safe place.
12. Remove the winch cable:
 - Remove the shaft from the winch block.
 - Wind the winch cable on the reel.
 - Put the shaft in the winch block.
13. Move the tow hook into the bay at the front of the compact crane.
 - Make sure that the hooks engage on the lugs.
14. Push the tow hook DOWN.
 - Make sure that the locking clip closes below the lugs.



To remove the tow hook:

1. Pull the clip to the front of the compact crane.
 - Make sure that the clip disengages the lugs.
2. Pull the tow hook UP and OUT of the bay.
3. Put the tow hook back in its storage container.

8.

Operation

8.1 Planning the lift

Record:

- the weight of the load,
- the location of the load's center of gravity,
- the overall maximum dimensions of the load,
- the location and quantity of approved lifting lugs or lifting points on the load,
- the slings and chains that are used,
- any height restrictions,
- the ambient temperature,
- The wind speed,
- Do a risk assessment.



Caution

Plan your lift and lift your plan.

8.2 Different ways to lift a load

A C6e Gen 2 Compact crane has several options to get the best results of your compact crane.

Boom only	Boom and winch	Boom and jib	Boom, winch and jib
Easy / quick setup			
Easy control			Most complex controls
Heaviest lift		Light lift	Light lift
Minimum repeatability	High repeatability		Highest repeatability
Minimum flexibility		Flexibility	Highest flexibility
Reach under	Reach under	Reach under	Reach under
	Reach over	Reach over	Reach over

8.3 Guiding the load

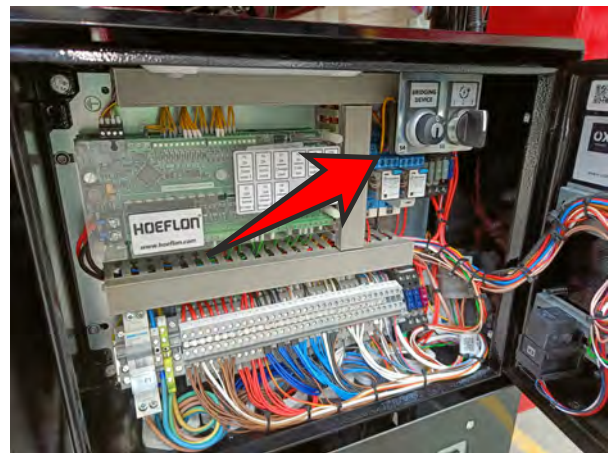
Obey the following rules when guiding a load:

- Use guide ropes.
- Never go under a load or between a load and surrounding obstacles.
- Always stand behind a load when it moves horizontally.
- Make sure that the operator and all personnel:
 - can always see each other.
 - always have open channels of communication
- Make sure that there is a clear escape route to safety.

8.4 Bridging device

The bridging device is a key switch. It is located in the electrical compartment at the rear of the compact crane.

The bridging device overrides all sensors.



Only use the bridging device:

- if the compact crane has stopped because of a broken or damaged sensor.
- To move the compact crane back to a safe situation from an unsafe situation.

Do not use this function to increase the outreach of the compact crane or to continue winching.

8.5 Emergency stop

8.5.1 Location

The emergency stop button is:

- At the rear of the crane.
- On the remote control.

8.5.2 Operation

Push the emergency stop to stop the crane immediately.



Caution

ONLY use in an emergency.

Do not use this button for ANY other reason.

Do not use the emergency stop to normally stop the crane.

8.5.3 Restart the crane after an emergency stop.



Caution

Make sure that it is safe to start the compact crane.

1. Reset the emergency stop.
2. Connect the remote control with the crane again (see 5.5 Connect with the compact crane).

8.6 Lifting the load with the boom

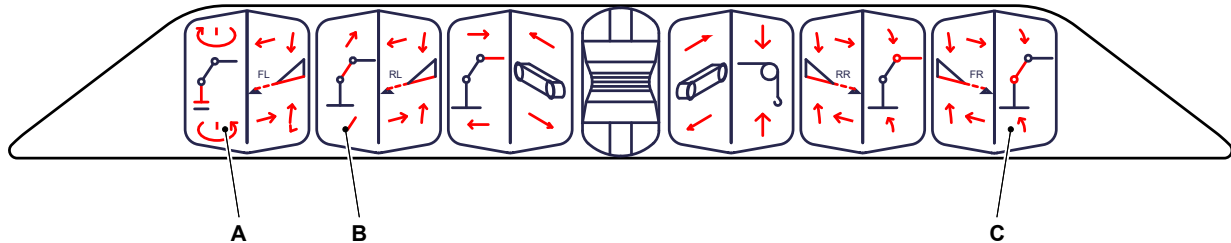
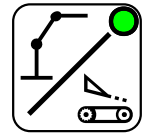
The crane lifts with maximum capacity when you lift with only the boom.

Use only the boom for a lift if:

- you are lifting a heavy load,
- it is a relatively simple lift.

8.6.1 Controls

Make sure that the superstructure is active (LED is ON).



- A. Rotate boom,
- B. Extend / Retract boom,
- C. Raise / lower boom.

8.6.2 Maximum angle of the boom when lifting with the hook

The maximum angle of the boom when you lift with the hook is 75°.



8.7 Lifting with the winch



Caution

Look at the winch cable when you unwind the winch. Make sure that the cable is not damaged. Stop work if the winch cable is damaged. Speak to your Hoeflon dealer before you continue working.



Caution

Do not use the winch without the hook block. If you do not use a hook block the cable will not wind correctly and will tangle.

8.7.1 When to use

Use the winch in combination with the boom for a lift if:

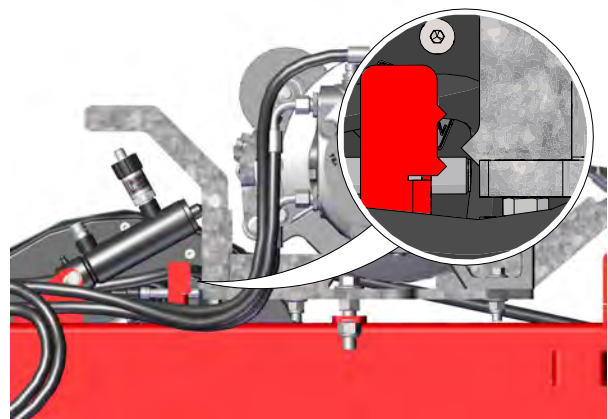
- the load is not too heavy (see Appendix)
- you need to repeat the same lift many times,
- you need to lift over things (walls, embankments)

8.7.2 Examine the winch

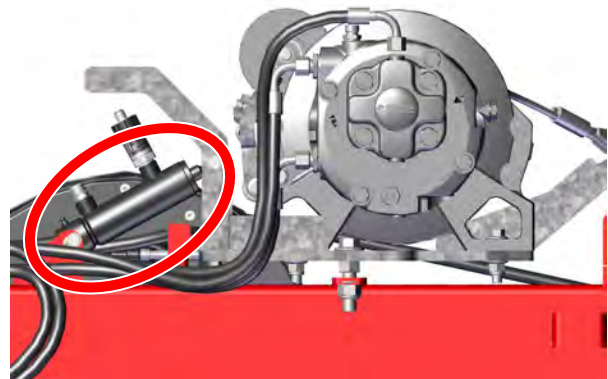
Make sure that the winch plate is:

- between the indicator points.
- not bent or damaged.

If the compact crane is ON and the winch is identified (see 7.10.1 Identify the winch) then the LED near the indicator must be ON.



Examine the cylinder behind the winch for leaks.



Make sure that the lifting cable is:

- not bent or damaged.
- neatly and tight on the drum.



If the lifting cable is not neat and tight on the drum:

1. Unwind the cable.
2. Tightly wind the cable back on the drum.

Make sure that there is tension on the winch cable while you wind the winch cable onto the winch

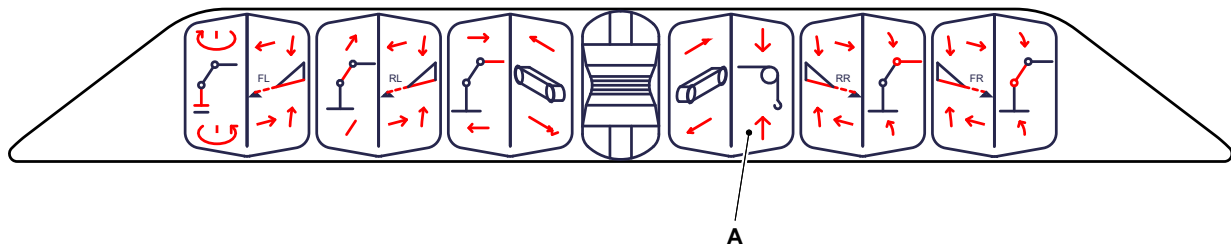
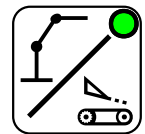


Note

Wear thick gloves

8.7.3 Controls

Make sure that the superstructure is active (LED is ON).

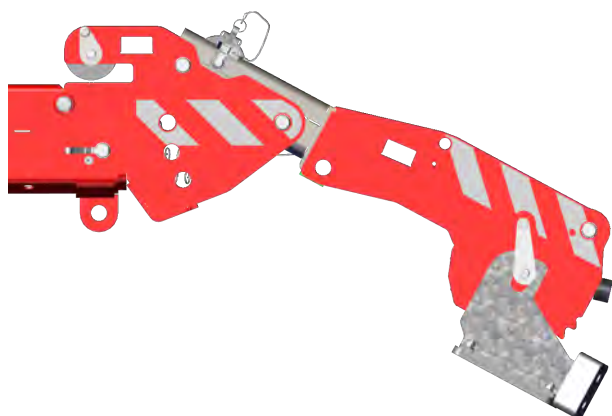


A. Wind / unwind winch.

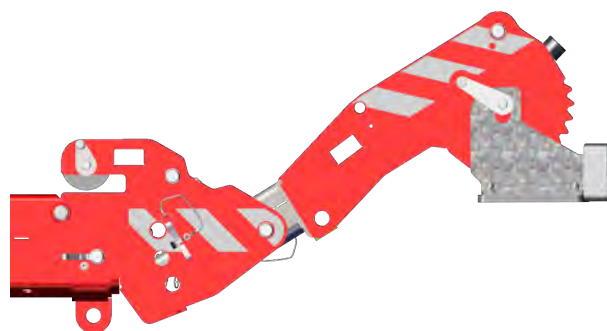
For more information (see 5.3.1 Default configuration)

8.7.4 Winch head positions in the lifting adapter

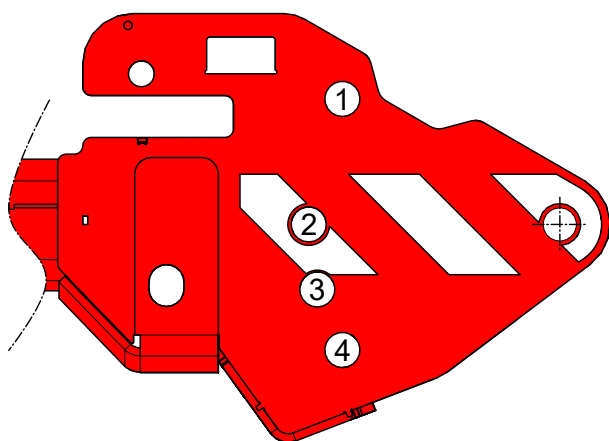
The maximum angle of is limited when you install the winch head in the lifting adapter. If the angle becomes more than this maximum angle the hook block will touch.



Lower position of the winch head in the adjustable section (Position 1)



Upper position of the winch head in the adjustable section (position 4)



Install the winch head in one of the following positions.

- Position 1 @ -30°
- Position 2 @ 0°
- Position 3 @ 15°
- Position 4 @ 30°

8.7.5 Maximum angle of the boom and the jib with the winch head

Winch head position	Number of reevings	Installed on the boom		Installed on the jib	
		Min. boom angle	Max. boom angle	Min. jib angle to horizontal	Max. jib angle to horizontal
Installed in the adjustable section with the winch head in the lower position (1)	0	0°	85°	-40°	60°
	1 or 2	0°	80°	-70°	60°
Winch head in position 2	0	0°	60°	-70°	55°
	1 or 2	0°	45°	-70°	55°
Winch head in position 3	0	0°	60°	-70°	40°
	1 or 2	0°	45°	-70°	55°
Installed in the adjustable section with the winch head in the upper position (4)	0	0°	60°	-90°	25°
	1 or 2	0°	35°	-90°	35°

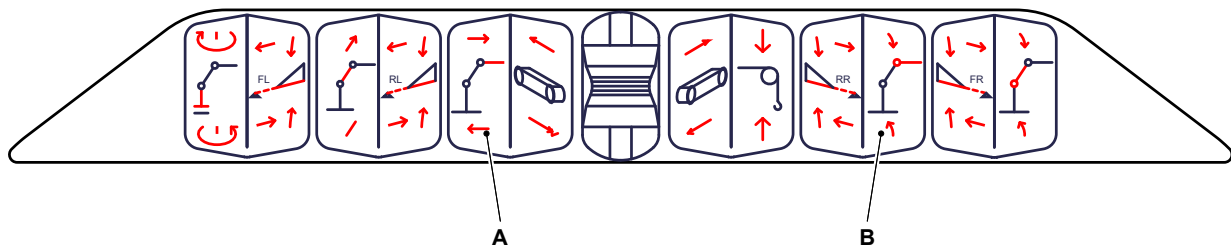
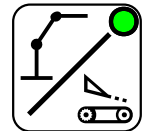
8.8 Lifting with the jib

Use the jib for a lift if:

- the load is not too heavy (see Appendix),
- you need to repeat the same lift many times,
- you need a high versatility, i.e. you need to lift:
 - over things (walls, embankments)
 - under things (ceilings, balconies, soffits)
- you need a long reach.

8.8.1 Controls

Make sure that the superstructure is active (LED is ON).



A. Extend / Retract jib,

B. Lower / raise jib.

(see 5.3.1 Default configuration)

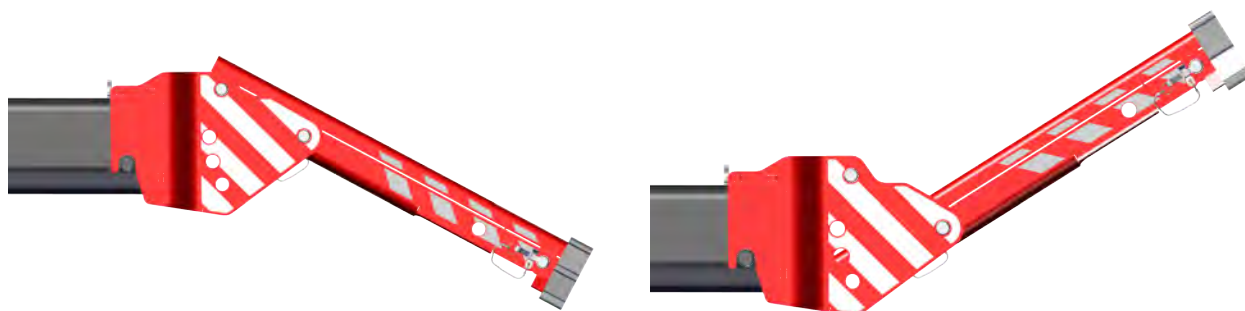
8.8.2 Maximum angle of the jib when lifting with the hook

The maximum angle of the jib when you lift with the hook is 60°



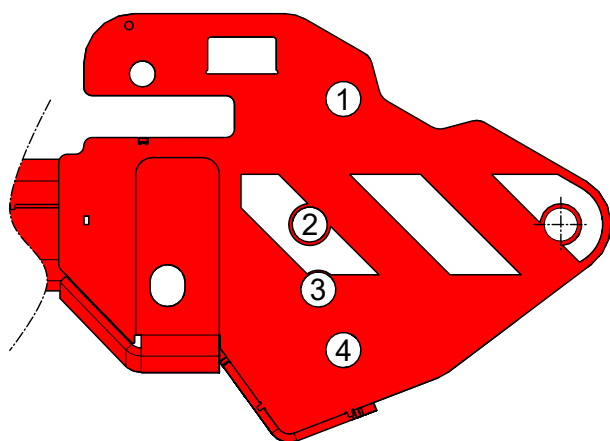
8.8.3 Searcher hook positions in the lifting adapter

The maximum angle of the jib is limited when you install the searcher hook in the lifting adapter. If the angle becomes more than this maximum angle the hook will touch the jib.



Lower position of the searcher hook in the adjustable section (Position 1)

Upper position of the searcher hook in the adjustable section (position 4)



Install the winch head (or searcher hook) in one of the following positions.

- Position 1 @ -30°
- Position 2 @ 0°
- Position 3 @ 15°
- Position 4 @ 30°

8.8.4 Maximum angle of the jib with the searcher hook

Searcher hook position	Min. boom angle	Max. boom angle	Min. jib angle to horizontal	Max. jib angle to horizontal
Installed in the adjustable section with the searcher hook in the lower position (1)	0°	85°	-40°	90°
Searcher hook in position 2	0°	60°	-70°	60°
Searcher hook in position 3	0°	60°	-70°	45°
Installed in the adjustable section with the searcher hook in the upper position (4)	0°	60°	-90°	30°

8.9 Lifting with the jib and the winch

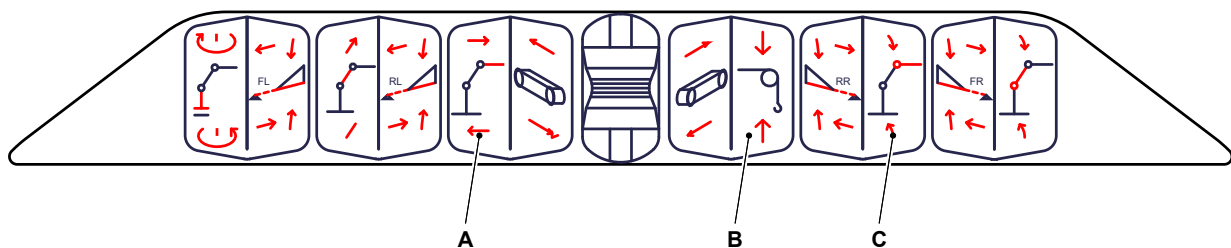
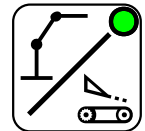
Use the winch and the jib for a lift if:

- it is a complex lift and you need to adapt your crane to the situation.
- you need to repeat the same complex lift many times.
- you need a high versatility, i.e. you need to lift:
 - over things (walls, embankments)
- you need a long reach.

The jib is protected with a winch stop. If the hook block touches the winch stop the crane will stop winching.

8.9.1 Controls

Make sure that the superstructure is active (LED is ON).

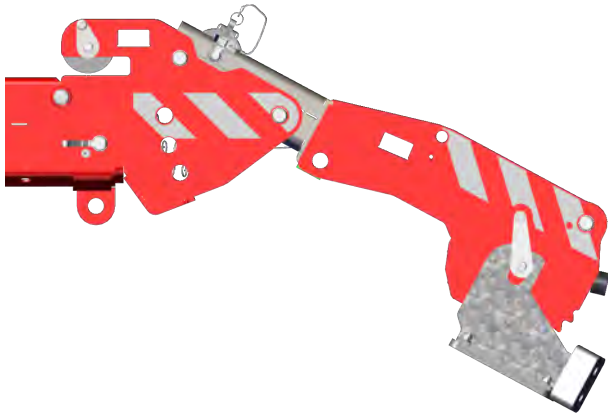


- Extend / Retract jib,
- Wind / unwind winch,
- Lower / raise jib.

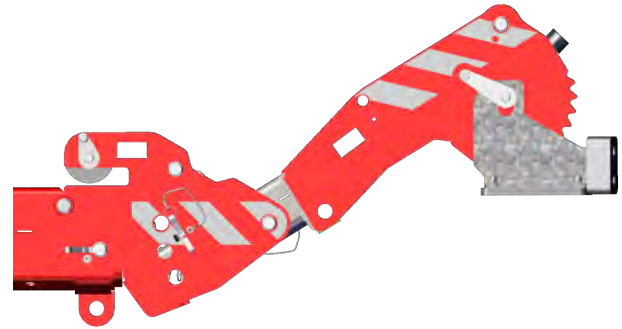
For more information (see 5.3.1 Default configuration)

8.9.2 Winch head positions in the lifting adapter

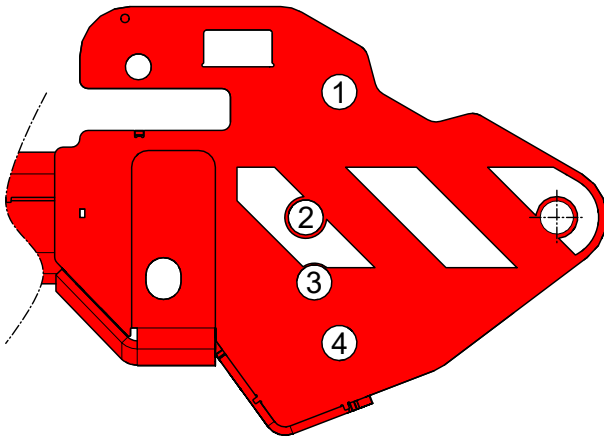
The maximum angle of is limited when you install the winch head in the lifting adapter. If the angle becomes more than this maximum angle the hook block will touch.



Lower position of the winch head in the adjustable section (Position 1)



Upper position of the winch head in the adjustable section (position 4)



Install the winch head in one of the following positions.

Position 1 @ -30°

Position 2 @ 0°

Position 3 @ 15°

Position 4 @ 30°

8.9.3 Maximum angle of the boom and the jib with the winch head

Winch head position	Number of reevings	Installed on the boom		Installed on the jib	
		Min. boom angle	Max. boom angle	Min. jib angle to horizontal	Max. jib angle to horizontal
Installed in the adjustable section with the winch head in the lower position (1)	0	0°	85°	-40°	60°
	1 or 2	0°	80°	-70°	60°
Winch head in position 2	0	0°	60°	-70°	55°
	1 or 2	0°	45°	-70°	55°
Winch head in position 3	0	0°	60°	-70°	40°
	1 or 2	0°	45°	-70°	55°
Installed in the adjustable section with the winch head in the upper position (4)	0	0°	60°	-90°	25°
	1 or 2	0°	35°	-90°	35°

8.10 "Pick and Carry" mode

In "Pick and carry" mode you can:

- lift a load without setting the outriggers.
- move the crane while lifting a load.



Caution

The crane only knows that the outriggers are UP, it does not know their position.

Make sure that the counterweight does not touch an outrigger leg when turning the superstructure.



Note

When the tracks are retracted the crane can only carry a load at the front .

You can only turn the superstructure while lifting a load if the two tracks are fully extended.

The maximum load in "Pick and carry" is smaller than during normal use.

The RCL is automatically adjusted in "Pick and Carry" mode (see 2.13 Rated Capacity Limiter (RCL)).

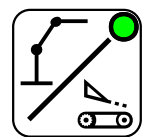
The crane switches to "Lifting" mode if the outriggers are lowered and the crane stands on the outriggers correctly.

8.10.1 Enter "Pick and Carry" mode without lifting a load

The compact crane will automatically enter "Pick and Carry" mode if the outriggers are raised off the ground.:

8.10.2 Enter "Pick and Carry" mode while lifting

1. When you lift a load and the load goes below 90% of the "Pick and carry" limit:
 - The letters "<PC" appear in the top right corner of the display.
2. Push the "Undercarriage / superstructure" button to go into undercarriage mode.
 - The led goes OFF.
3. Raise and retract the outriggers.
 - Make sure that the counterweight will not hit the outriggers.
4. Now you can move the crane while lifting.



8.11 Removing and installing the counterweight

8.11.1 Remove the counterweight

Remove the counterweight:

- to reduce the net weight of the crane.
- when you replace the wear parts in the sliding frame.

Use the boom of the crane or use a second crane to lift the counterweight.



Note

Use the special steel cable that is supplied with the crane.

Preparations

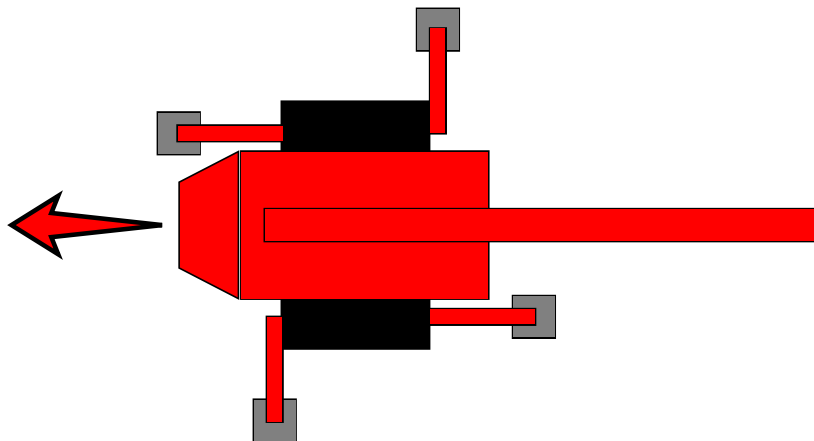
Make sure that:

- there is enough space around the compact crane (ca 10 meters).
- the ground is flat and stable.
- there is a safe and stable place to put the counterweight.



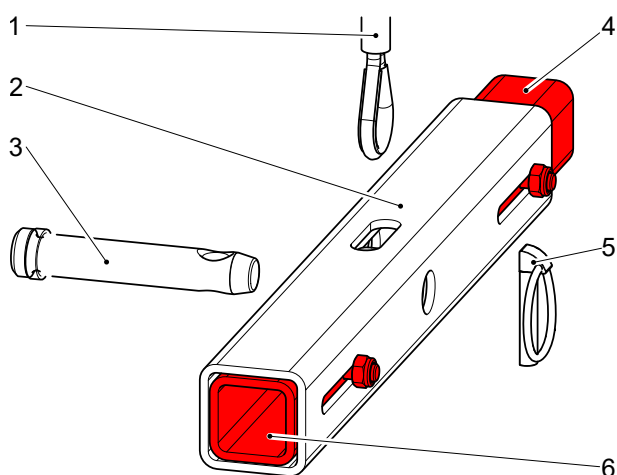
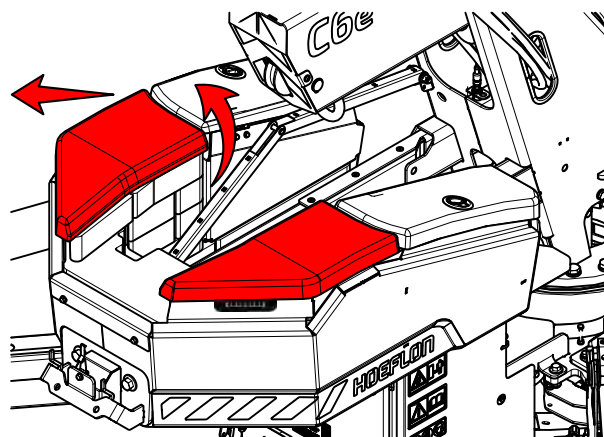
Note

Put the counterweight on the left side of the crane. This decreases the chances of damaging a sensor.

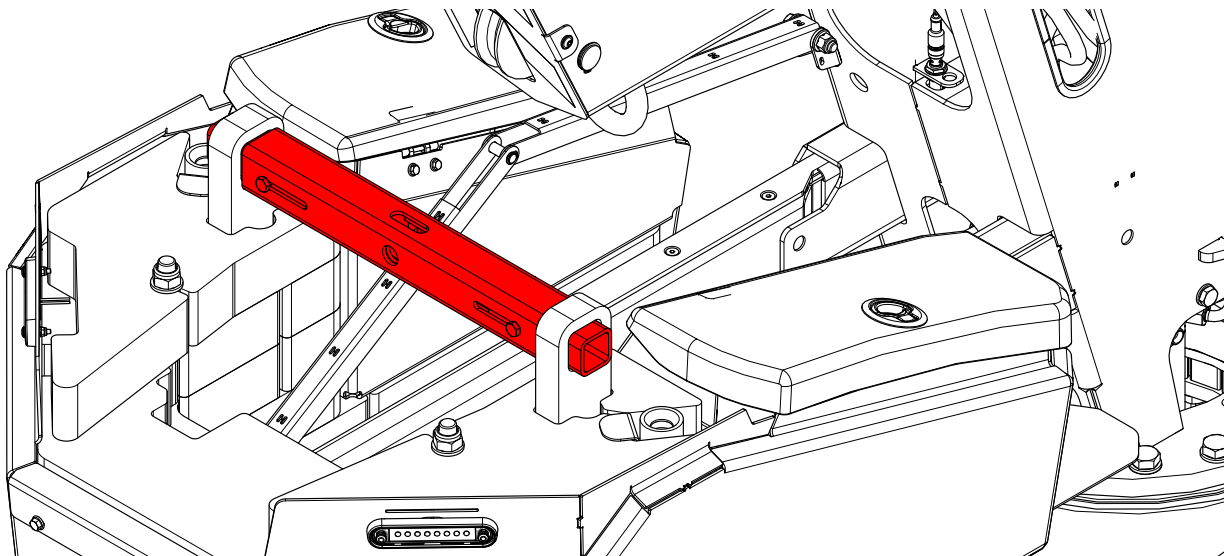


1. Use the outriggers to make the crane level.
 - Lift the tracks so that they are immediately above the ground.
 - Put the outriggers in the "square position" as shown in the diagram.
2. Fully retract the tracks.
3. Make sure that the boom is horizontal.

4. Turn the superstructure so that:
 - the boom is on the right side of the undercarriage
 - the counterweight is on the left side of the undercarriage.
5. Fully extend the counterweight.
6. Pull the cover UP on the inner corner and move it to the side.
7. Remove the cover other in the same way.



1. Lifting cable
2. Body
3. Pin
4. Lifting bar (extended)
5. Safety clip
6. Lifting bar (retracted)

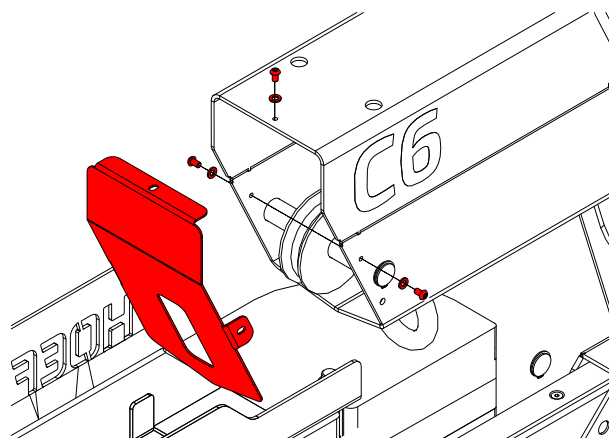


8. Remove the clip and the pin.
9. Make sure that the two lifting bars of the counterweight lifting bracket are retracted.
10. Put the counterweight lifting bracket in the counterweight.
 - Make sure that the hole for the cable points UP.
11. Pull the lifting lugs UP.
12. Extend the two lifting bars of the counterweight lifting bracket.

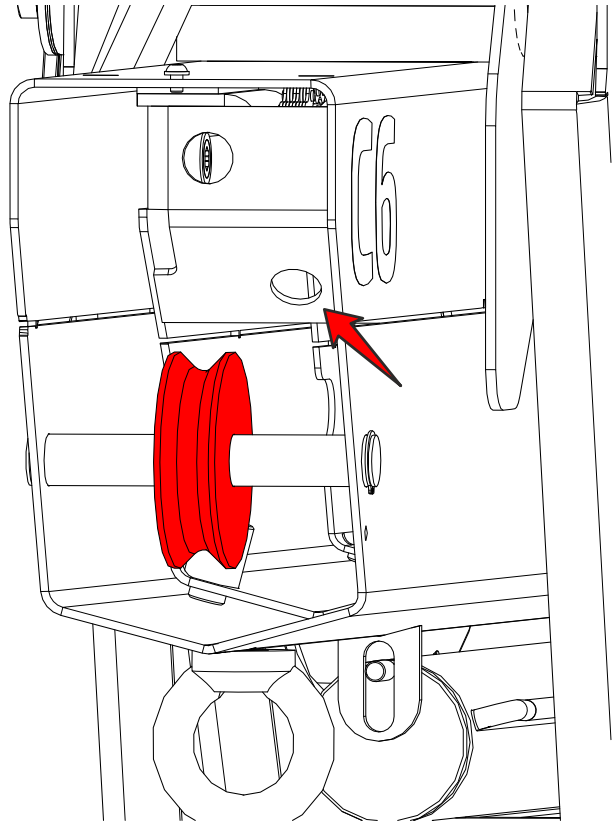
**Caution**

Make sure that the two lifting bars of the counterweight lifting bracket fully engage the lifting lugs on the counterweight.

13. Remove the bottom cover of the boom.



14. Connect the lifting cable to the hole in the back of the second boom section.
15. Put the cable over the roll.
16. Put the lifting cable through its hole in the counterweight lifting bracket.
17. Push the pin through its hole in the counterweight lifting bracket.
 - Make sure that the pin fully engages with the lifting cable.
18. Lock the pin with the safety clip.



Or connect a second crane



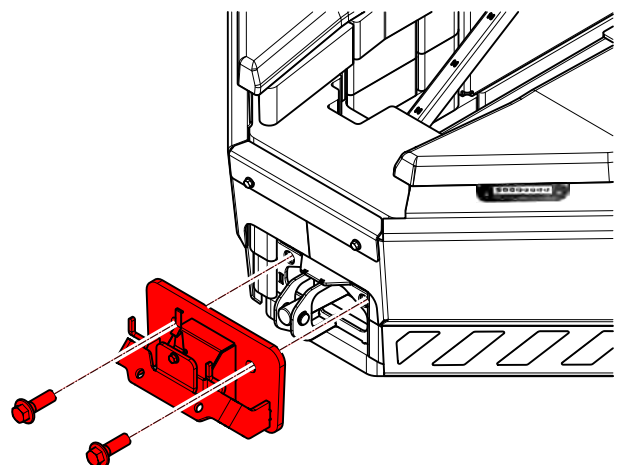
Note

Use a chain with the correct rating.

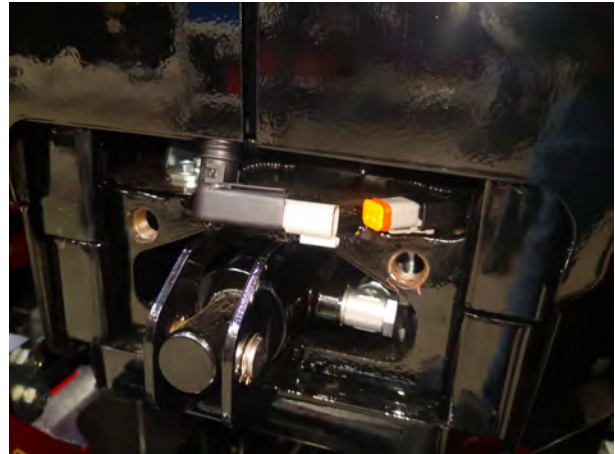
19. Remove the connector (do step 7).
20. Install the counterweight lifting bracket (do steps 8 thru 12)

Lift the counterweight

21. Remove the two bolts of the counterweight retainer plate.
22. Remove the counterweight retainer plate.



23. Disconnect the electrical plug



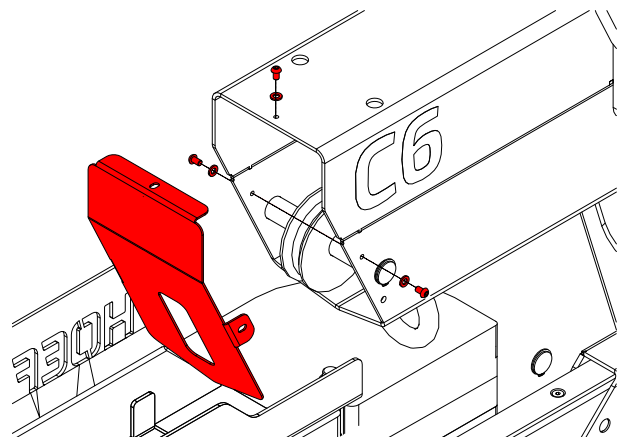
24. Lift the counterweight a small distance so that it is free from the counterweight frame.
25. Fully retract the counterweight frame.
26. Make sure that the counterweight hangs free.
27. Put the counterweight on the floor.

8.11.2 Install the counterweight

1. Lift the crane on the outriggers.
2. Make sure that the crane is level.
3. Fully retract the counterweight.

Connect the boom

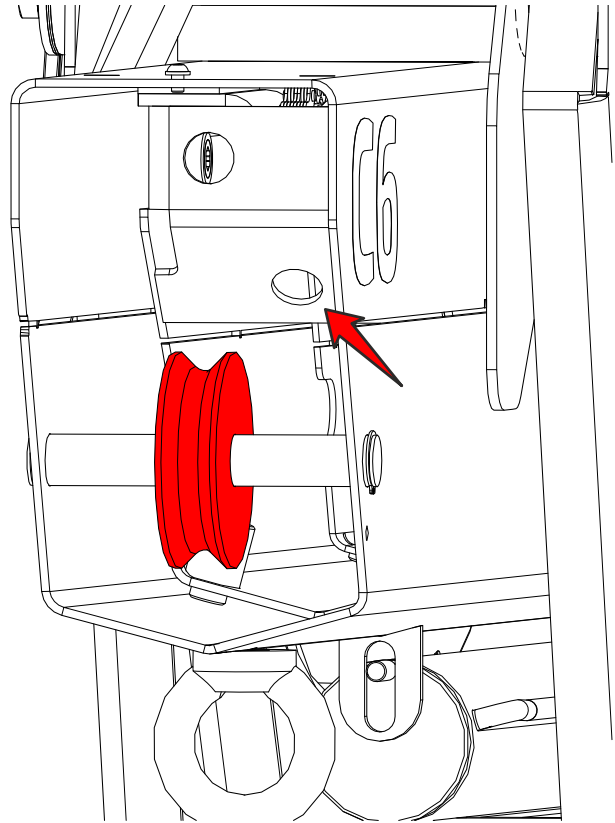
4. Remove the bottom cover.



Note

Use the cable that is supplied with the crane or make sure that the cable that you use has the correct rating.

5. Connect a steel cable to the hole in the back of the second boom section.
6. Put the cable over the roll.
7. Attach the cable to the pin in the center of the counterweight bracket.



Or connect a second crane



Note

Use the cable that is supplied with the crane or make sure that the cable that you use has the correct rating.

4. Attach a chain to the pin in the center of the counterweight bracket and the crane which is used to remove the counterweight.

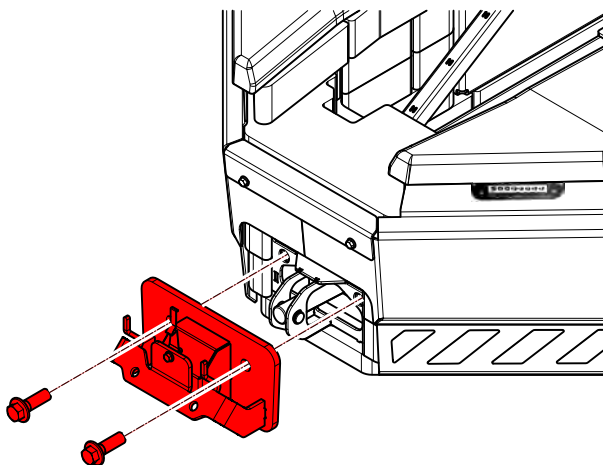
Lift the counterweight

5. Lift the counterweight with the counterweight bracket onto the counterweight frame.
6. Fully extend the counterweight.
7. Make sure that the back of the counterweight frame extends through the hole in the counterweight.

8. Connect the electrical plug.



9. Install the plate.
10. Torque the two bolts on the back of the counterweight to 120 Nm.



9.

Maintenance

9.1 Introduction

The maintenance intervals and tasks are shown in the maintenance schedule. The lubrication points and intervals are shown in the lubrication chart.

Obey these instructions and make sure that your equipment stays in good condition.

Unusual noises or vibrations can indicate a defect in the compact crane. Speak to your Hoeflon dealer immediately and schedule a servicing.

9.2 Maintenance work

The risk of accidents increases during maintenance, cleaning and service. Let your Hoeflon dealer do the maintenance on the compact crane.

The lubrication and maintenance schedules show all maintenance work and intervals. Make sure that you do the maintenance on time.

In the Netherlands, a sticker gives the date when the next inspection is necessary.

Refer to your local authorities for the rules and guidelines on the inspection of the Hoeflon C6e Gen 2 Compact crane.



9.2.1 First use

Make sure that you do the daily inspection before using the compact crane for the first time (see 7.1 Daily inspection (inspection before use)).

9.2.2 Scheduled servicing

1. The first scheduled servicing is after 2 weeks or 50 hours of operation. Whichever comes first.
2. After that do the servicing of the compact crane every year or every 250 hours of operation. Whichever comes first.
3. Scheduled servicing and inspections must be done by your Hoeflon dealer.

9.3 Safety during maintenance

Obey the maintenance safety precautions when you do maintenance on the compact crane.

If you do not obey these precautions you can damage the equipment or hurt yourself or someone else.

Obey all applicable legal requirements before starting maintenance work, in particular the requirements for occupational safety and accident prevention.

Your safety and the safety of others, is most important during the maintenance of equipment.

If you do not obey the safety rules in this chapter you can damage the machine, hurt or kill someone.

- When you do maintenance work on the compact crane make sure that:
 - the compact crane is stopped.
 - the key is removed from the switch.
- Do not smoke during maintenance work.
- Make sure that the tank caps and oil filler caps are closed.
- Do not wear rings, watches and jewellery while doing maintenance work.
- Tie back long hair so that it cannot get caught in equipment.
- Do not wear loose or hanging clothing.
- Never grab pressure lines with your hands when liquid comes out. Liquids (fuel or hydraulic oil) can penetrate the skin when released under high pressure. If this happens, get medical advice immediately to prevent the risk of a dangerous infection.
- Stay away from hot surfaces.
- Never work under a lifted boom, counterweight or other machine parts.
- Only use approved non-flammable detergents.
- Never remove warning stickers.
- Obey all warnings and safety precautions on the machine and in the user manuals.
- Discard oils, fuels and filters correctly.
- Make sure that only approved personnel is near the compact crane during repair and maintenance work.
- Use correct PPE , protective clothing, gloves and safety glasses, when you do maintenance.



9.4 Maintenance schedule

9.4.1 General

Description of maintenance	Action	Interval in hours (o = manufacturer/dealer, ● = owner)							
		Daily	First 50 hours	50	100	250	500	1000	4000
Machine	Clean		●	●					
Safety devices	Inspect	●	●						
Lifting accessories (cables, hooks etc.)	Inspect/replace	●	●						
Control levers	Inspect	●	●						
Condition and presence of pictograms	Inspect	●	●			o			
Mechanical components	Inspect	●	●						
Boom clearance	Inspect/adjust							o	
Slewing ring	Inspect/tighten		o				o		
	Lubricate		●	●					
Construction incl. pins, shafts etc.	Inspect					o			
Boom extension and retraction chains	Inspect		●/o		●				
	Lubricate				●				
Plastic slide plates on boom	Inspect					o			
	Lubricate		●	●					

Description of maintenance	Action	Interval in hours (o = manufacturer/dealer, ● = owner)							
		Daily	First 50 hours	50	100	250	500	1000	4000
Boom guide bolts	Inspect					o			
Pivot points and extendable sections	Lubricate		●	●					
Bolt connections in turn table	Tighten		●/o				o		
Boom wear parts (completely disassemble)	Replace								o

9.4.2 Crawler track undercarriage

Description of maintenance	Action	Interval in hours (o = manufacturer/dealer, ● = owner)							
		Daily	First 50 hours	50	100	250	500	1000	4000
Tension of crawler tracks	Inspect/adjust			●					
Oil level drive motors	Inspect/Fill					o			
	Replace		o				o		

9.4.3 Hydraulic system

Description of maintenance	Action	Interval in hours (o = manufacturer/dealer, ● = owner)							
		Daily	First 50 hours	50	100	250	500	1000	4000
Hydraulic oil	Inspect	●							
	Replace							○	
Leaks	Inspect	●							
Hydraulic hoses	Inspect		●			○			
	Replace								○
Pressure levels	Inspect		●					○	
Hydraulic return filter	Replace		○				○		
Hydraulic pressure filter	Replace						○		
Stop valves and pressure relief valve	Test							○	
Hydraulic system	Flush								○

9.4.4 Electrical system

Description of maintenance	Action	Interval in hours (o = manufacturer/dealer, ● = owner)							
		Daily	First 50 hours	50	100	250	500	1000	4000
Emergency stop and sensors	Inspect	●							
Wiring	Inspect					○			
Wiring connectors	Inspect					○			

Description of maintenance	Action	Interval in hours (o = manufacturer/dealer, ● = owner)							
		Daily	First 50 hours	50	100	250	500	1000	4000
Voltage	Inspect					o			

9.5 Oils and lubricants

Use one of the following recommended oil types.

Manufacturer	Hydraulic oil	Final drives
Q8	Heller 46	T55
Total	Equavis ZS 46	EP-B 80W90
Shell	Shell Tellus S2/S3	Spirax S3 AX 80W-90
Kroon oil	Perlus ZF 46	Gearlube GL-5 80W-90

9.5.1 Grease

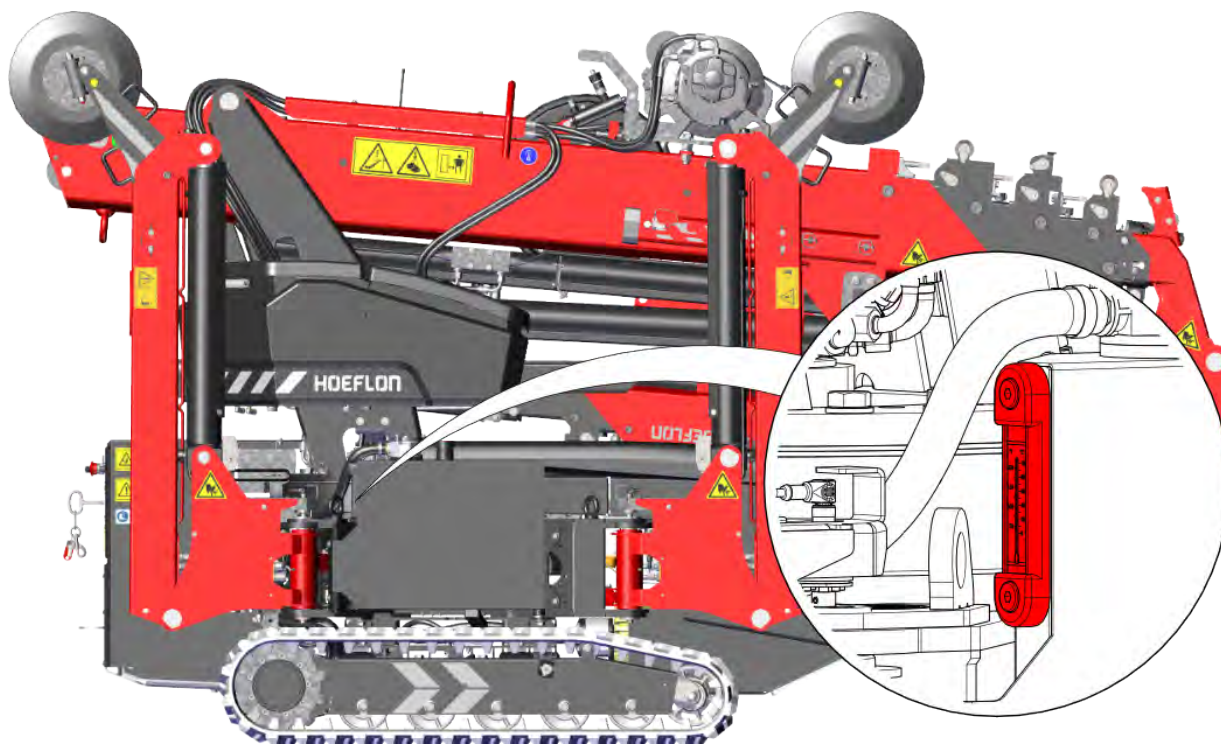
Grease fittings: EP2

Aerosol grease: Use INTERFLON GREASE OG or comparable

9.6 Hydraulic system

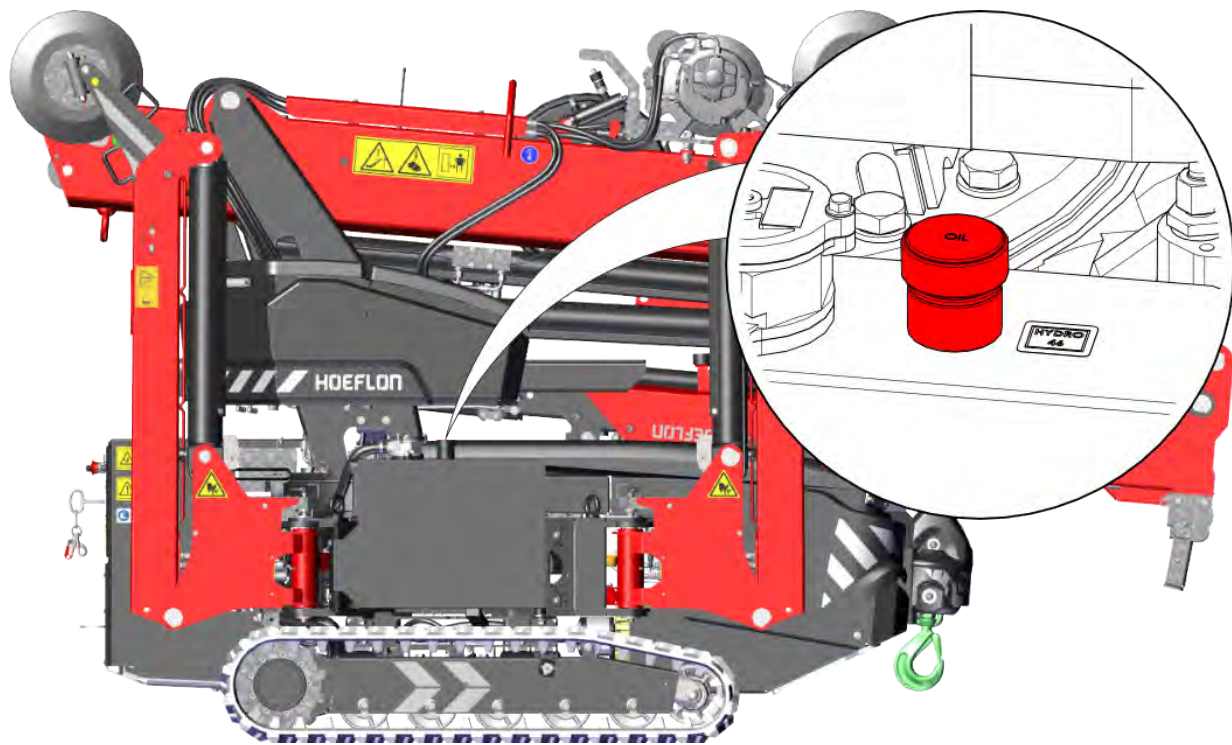
9.6.1 Inspect the oil level

1. Make sure that the crane is horizontal.
2. Fully retract the:
 - Boom and the jib
 - Counterweight
 - Tracks
3. Stop the crane and remove the key
4. Look at the oil level in the level indicator on the side of the tank.



5. The level must be between the lines.
6. Add oil if necessary, (see 9.6.2 Fill the oil tank).

9.6.2 Fill the oil tank



1. Clean the filler cap.
2. Remove the oil filler cap. Put it in a safe place.
3. Add hydraulic oil until the oil level is between the lines on the sight glass.
 - Fill the tank with new hydraulic oil. Use oil with the correct specifications (see 9.5 Oils and lubricants)
4. Put the filler cap back onto the tank.

9.7 Lubrication

Lubricate the compact crane as shown in the lubrication chart below.

Grease nipples

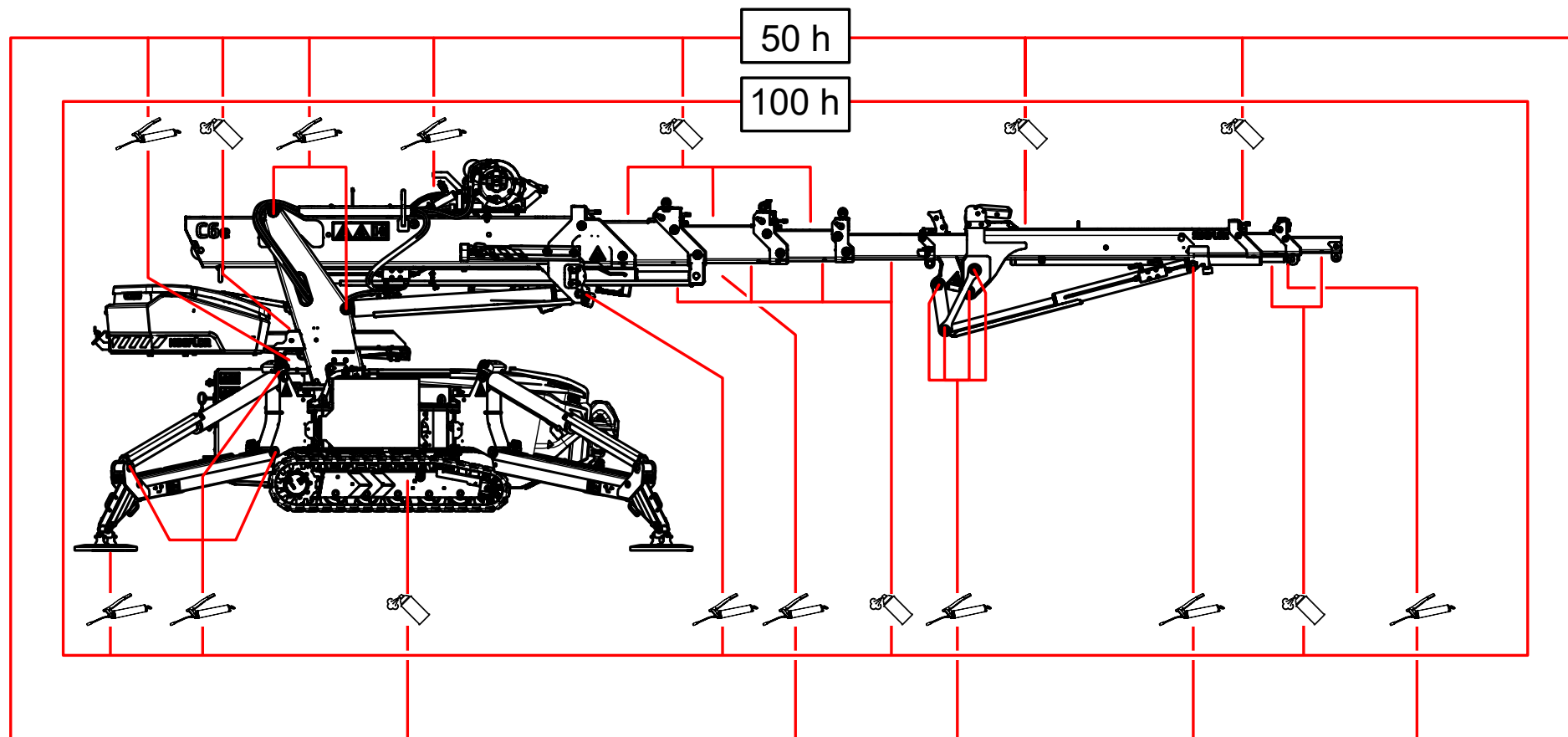


Note

- Clean the grease nipples thoroughly before lubrication.
- Remove all excess and old grease from the booms.
- Use new and clean grease.

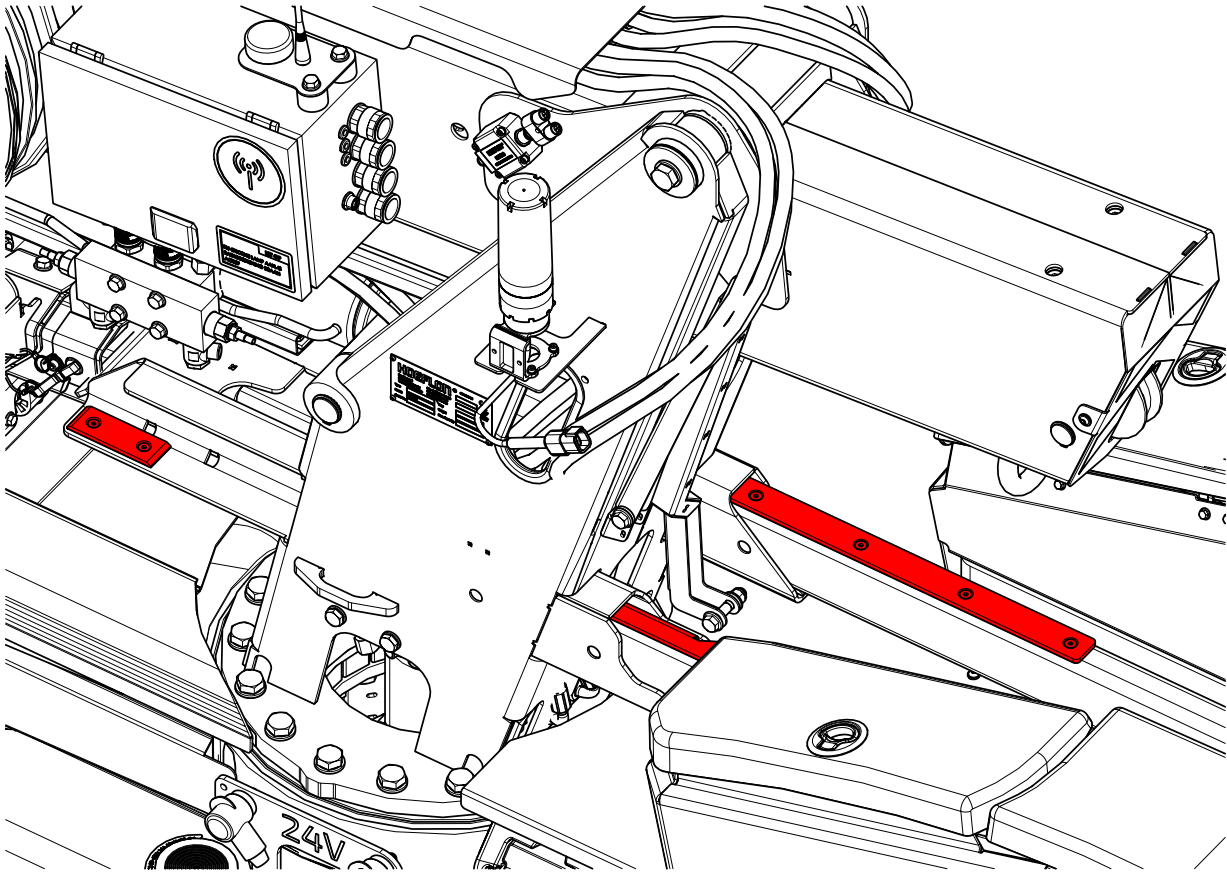
Sliding parts**Note**

Use INTERFLON GREASE OG or comparable.



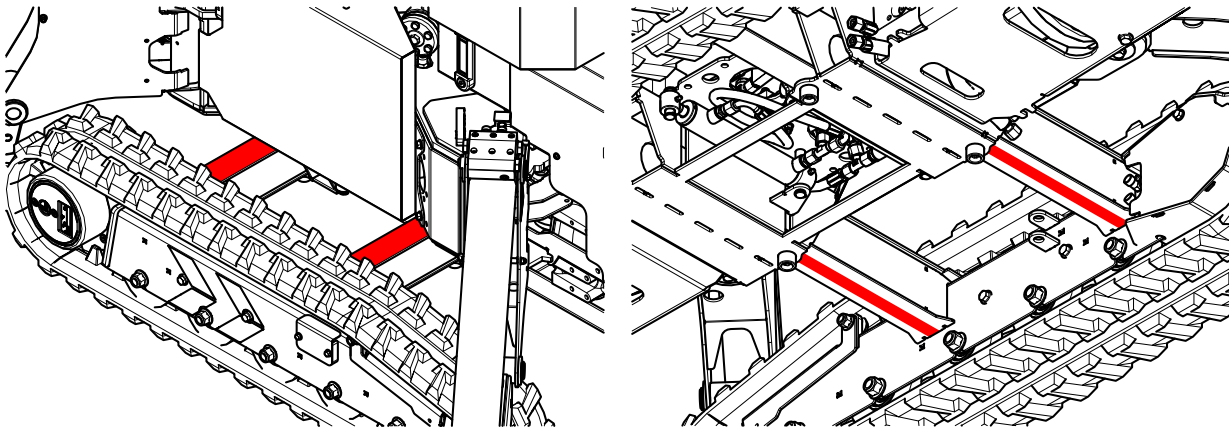
9.8 Every 50 hrs

9.8.1 Plastic wear strips of the counterweight



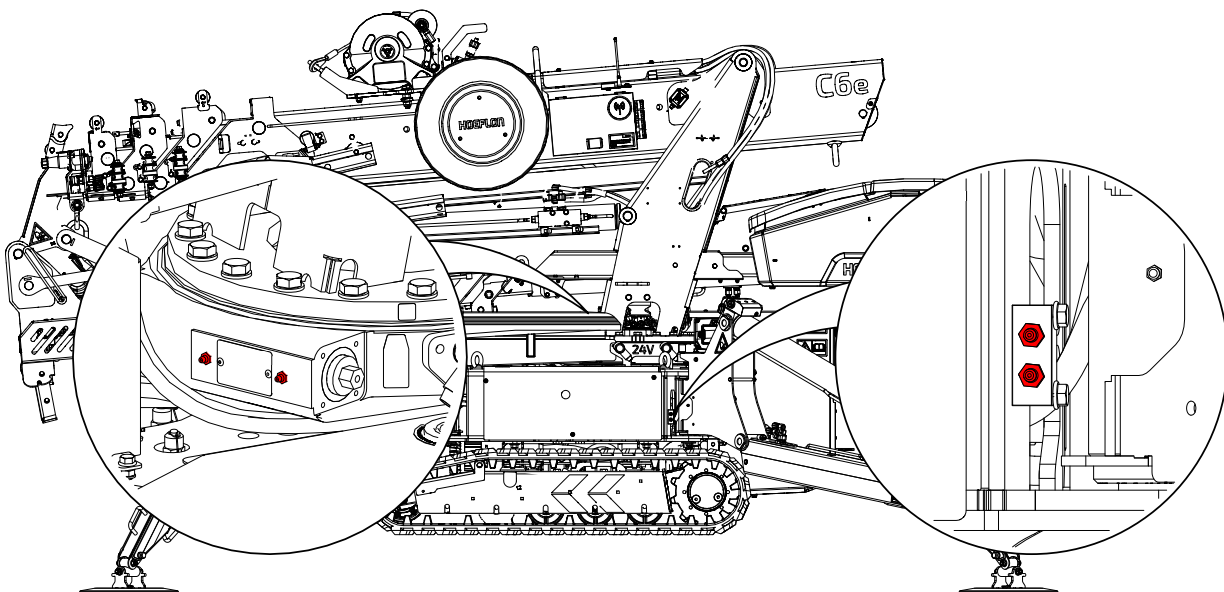
1. Fully extend the counterweight.
2. Apply grease:
 - to the plastic wear strips.
 - to the bottom of the counterweight beams.

9.8.2 Track extenders



1. Make sure that the jib and boom are in the transport position.
2. Put the outrigger legs in the correct position.
 - Each leg at 48°
3. Fully lift the crane on the outriggers.
4. Fully extend the tracks.
5. Clean the top of the track extenders.
6. Apply grease:
 - to the plastic wear strips.
 - to the top of the track extender beams.
 - to the center of the bottom of the track extender beams.

9.8.3 Grease nipples on the drive of the slewing ring



There are two grease nipples next to each other on the drive of the slewing ring.

There are two grease nipples on a block on the left at the rear of the undercarriage.

Lubricate these every 50 hours of operation or at least every four months.

1. Remove the top cover at the front of the crane.
2. Apply grease through the grease nipples.
3. Turn the crane superstructure a small distance.
4. Do step 2 and 3 again until the superstructure has been fully rotated.
5. A small amount of grease is permitted to leak from under the seal on the inside of the slewing ring.

**Note**

Do not remove this grease. It functions as a dust seal.

6. Make sure that the seal is still in good condition.

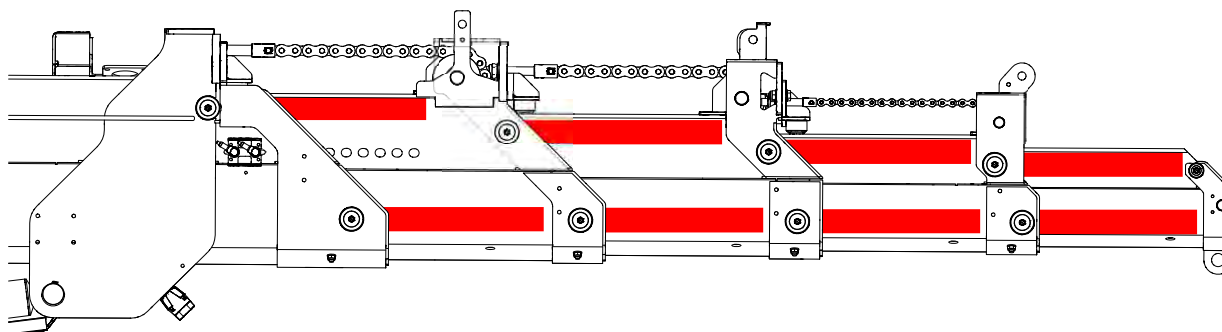
**Note**

Push the seal back in position if it is pushed out by the addition of new grease.

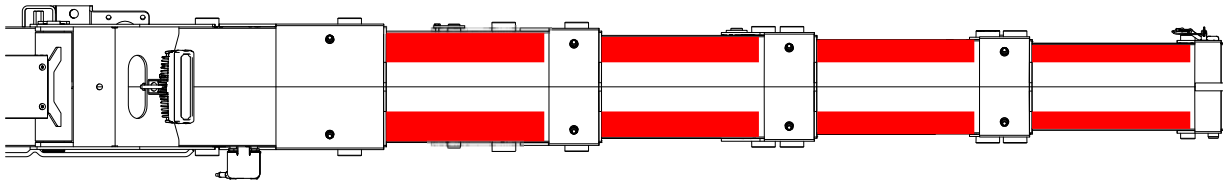
7. Apply grease through the grease nipples on the undercarriage.

9.8.4 Boom sections

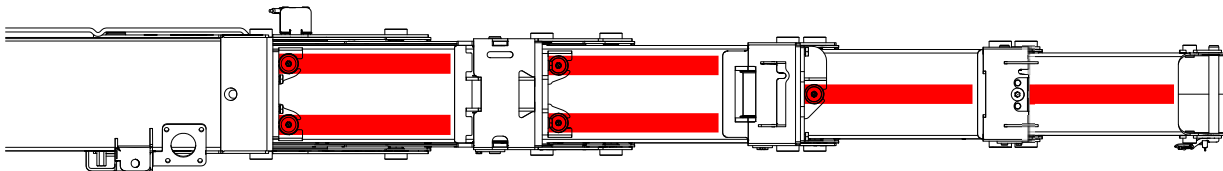
1. Fully extend the boom.



2. Apply long straight lines of grease on the left and right sides of the sections.
 - Refer to the red lines in the figure.
 - The stripes of grease align with the adjustment caps on the sections.



3. Apply two long straight lines of grease on the bottom side of the sections.
 - Refer to the red lines in the figure.
 - The stripes of grease align with the adjustment caps on the sections.



4. Apply long straight lines of grease on the top of the sections.
 - Refer to the red lines in the figure.
 - Two lines on the second and third sections
 - One line on the fourth and fifth sections.
 - The stripes of grease align with the adjustment caps on the sections.
5. Extend and retract the boom several times.
6. Retract the boom fully.

9.9 Every 100 hrs

9.9.1 Chain maintenance

- Clean a chain with petroleum or diesel. Do not clean them with acidic agents or a pressure cleaner. These can damage the chains.
- Examine the chains. Make sure that:
 - they are clean,
 - they are lubricated,
 - there is no rust,
 - the pins and the plates are not broken or worn.
- Examine the chain rollers.
 - Make sure that the rollers are not worn or damaged.
 - Make sure that the roller bearings are not worn or damaged

Speak to your Hoeflon dealer if a chain is broken. Do not continue working.

9.9.2 Lubricate the chains



Note

Use INTERFLON GREASE OG or comparable..

1. Fully extend the boom.
2. Clean the chains.
3. Spray the chains.
4. Retract the boom.

9.10 Crawler tracks

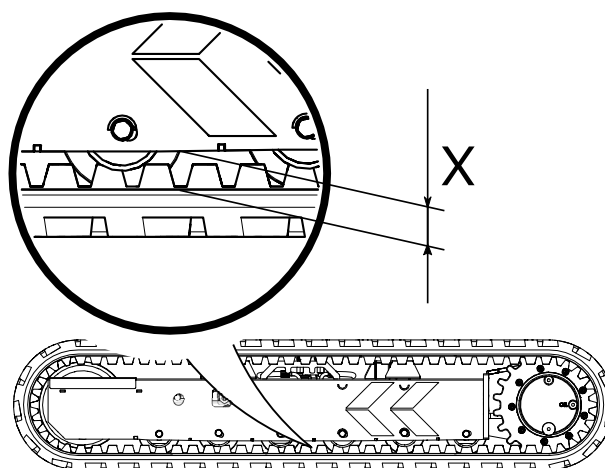
9.10.1 Inspect the tension

Make sure that the tension in the two crawler tracks is correct.

If the crawler tracks are too loose the sprocket wheels can slip and no longer drive the crawler track. Slipping sprocket wheels can cause damage to the crawler track.

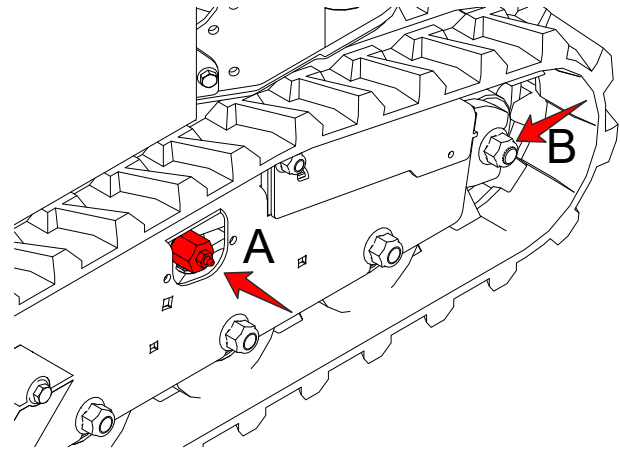
If the crawler tracks are too tight they will wear too quickly.

1. Make sure that the jib and boom are in the transport position.
2. Put the outrigger legs in the correct position.
 - Each leg at 48°
3. Lift the crane on the outriggers until the crawler tracks are 10 cm above the ground.
4. Examine the tension (X) in the two crawler tracks.
 - Minimum: 20 mm
 - Maximum: 60 mm.



9.10.2 Loosen a crawler track

1. Make sure that the jib and boom are in the transport position.
2. Put the outrigger legs in the correct position.
 - Each leg at 48°
3. Remove the bush with the grease nipple from of the tensioning cylinder (A).
4. Lift the crane on the outriggers until the crawler tracks are 10 cm above the ground.
5. Push the tension wheel to the rear (B).
 - Usually the tension wheel moves to the rear because of the weight of the tracks.
 - Grease flows out of the tensioning cylinder.
6. Clean the unwanted grease off the tension cylinder.
7. Install the bush with the grease nipple back onto the tension cylinder.

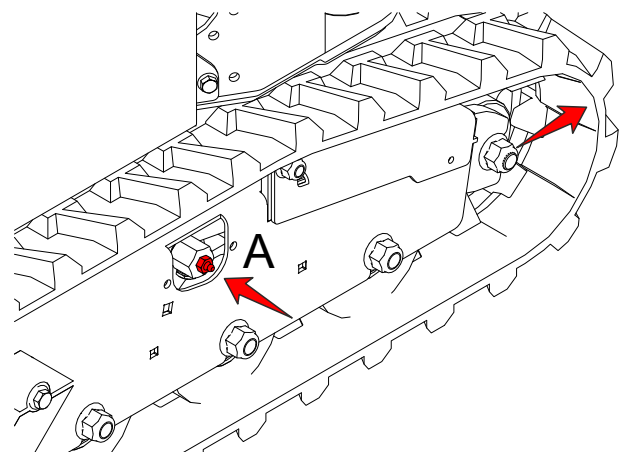


Caution

Do not forget to install the Bonded Seal.

9.10.3 Tighten a crawler track

1. Make sure that the jib and boom are in the transport position.
2. Put the outrigger legs in the correct position.
 - Each leg at 48°
3. Lift the crane on the outriggers until the crawler tracks are 10 cm above the ground.
4. Attach a grease gun on the grease nipple (A) in the track frame.
5. Pump grease into the tension cylinder until the track tension is correct (see 9.10.1 Inspect the tension).



10.

Troubleshooting

10.1 The remote control cannot connect with the compact crane

10.1.1 The LED does not flash

There is a problem with the RC6.

1. Make sure that all the levers are in the central position.
2. Calibrate the RC6 if all the levers are in the central position (see 5.3.2 Calibration)
3. Do an inspection of the **Connect** button (A).
4. Speak to your Hoeflon dealer if you still cannot connect.

10.1.2 The LED stops flashing and goes OFF

There is a problem with the compact crane. Speak to your Hoeflon dealer. Do not continue working.

10.2 Charging the 24V batteries

The crane will not start if the 24V batteries are empty. Charge the 24V batteries with the emergency charging points.

- Use a 24V charging system.
 - Make sure that the area is dry and clean.
1. Remove the key.
 2. Connect the + start assistance cable by clamping it firmly to the + charging terminal (with the red protective cap).
 3. Connect the - start assistance cable by clamping it firmly to the - charging terminal.

4. Make sure that the start assistance cables:
 - are connected to the emergency charging points correctly.
 - are not twisted together.
5. Let the crane recharge for a few minutes.
6. Insert the key and start the crane.
7. Remove the start assistance cables in the reverse order (- first, then +).

10.3 Error codes

**Warning**

Stop work and move the compact crane into a safe position if an error appears on the display.
Talk to your Hoeflon dealer .

**Note**

If a warning appears on the display then you must correct the defect before you can continue (see 5. Remote control).

10.4 Fuses and relays

**Note**

Always find the cause of the broken fuse first.
Repair or replace the broken part before you change the fuse.

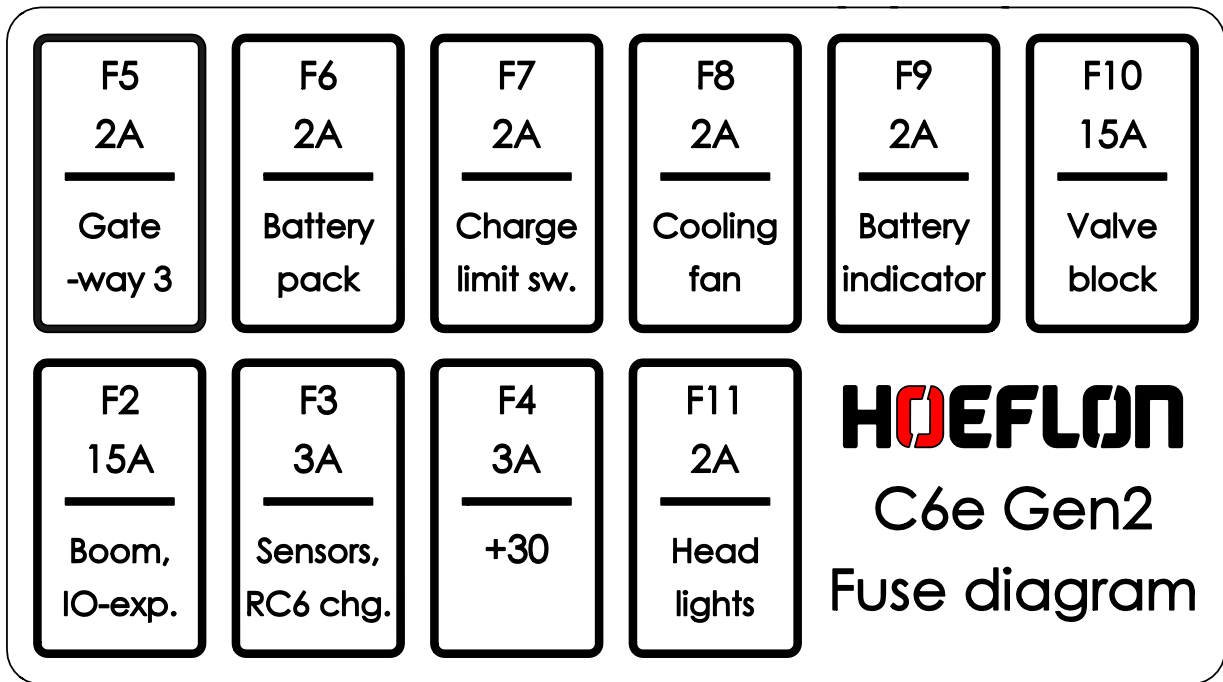
**Warning**

Always replace a fuse with a fuse of the same rating.

10.4.1 Replace a broken fuse or relay

1. Stop the crane and remove the key.
2. Open the electrical cabinet.
3. Replace the broken fuse or relay.
4. Close the electrical cabinet.

10.4.2 Fuses



11.

Transport and storage

11.1 Transporting a compact crane

11.1.1 Put the compact crane in the transport position

1. Remove any loads from the crane.
2. Turn the superstructure so that it is in line with the undercarriage.
 - Use the indicator on the remote control (see 5.4 Display).
3. Fully wind the winch cable on the winch.
4. Remove all attachments and put them in their storage positions.
5. Fully retract the jib.
6. Turn the jib under the boom.
7. Fully retract the counterweight.
8. Fully retract the boom.
9. Fully lower the boom.
10. Move the outrigger extensions back into the outriggers (see 7.6 Using the outrigger extensions).
11. Retract the outriggers.
12. Put the outriggers UP.
13. Remove the key.

11.1.2 Put the compact crane on the transport vehicle

**Caution**

Make sure that the transport vehicle:

- is rated to transport the full weight of the compact crane (see 1.3 Type plate).
- is large enough to contain the compact crane (see 3.1 Dimensions).

Use loading ramps to move the compact crane onto the transport vehicle.

Make sure that the loading ramps:

- can carry the full weight of the compact crane (see 3.3.2 Crane and component weights).
- are long enough so that the angle with the horizontal is less than the maximum permitted slope (see 7.4.2 Maximum slope angles when moving an unloaded compact crane).

**Caution**

Use slow speed when driving up a ramp or slope.

**Note**

When moving the compact crane on a slope (e.g. up loading ramps onto a transport vehicle), extend the outriggers on the LOW side to stop the crane from tilting (see 7.5.2 How to set the outriggers manually).

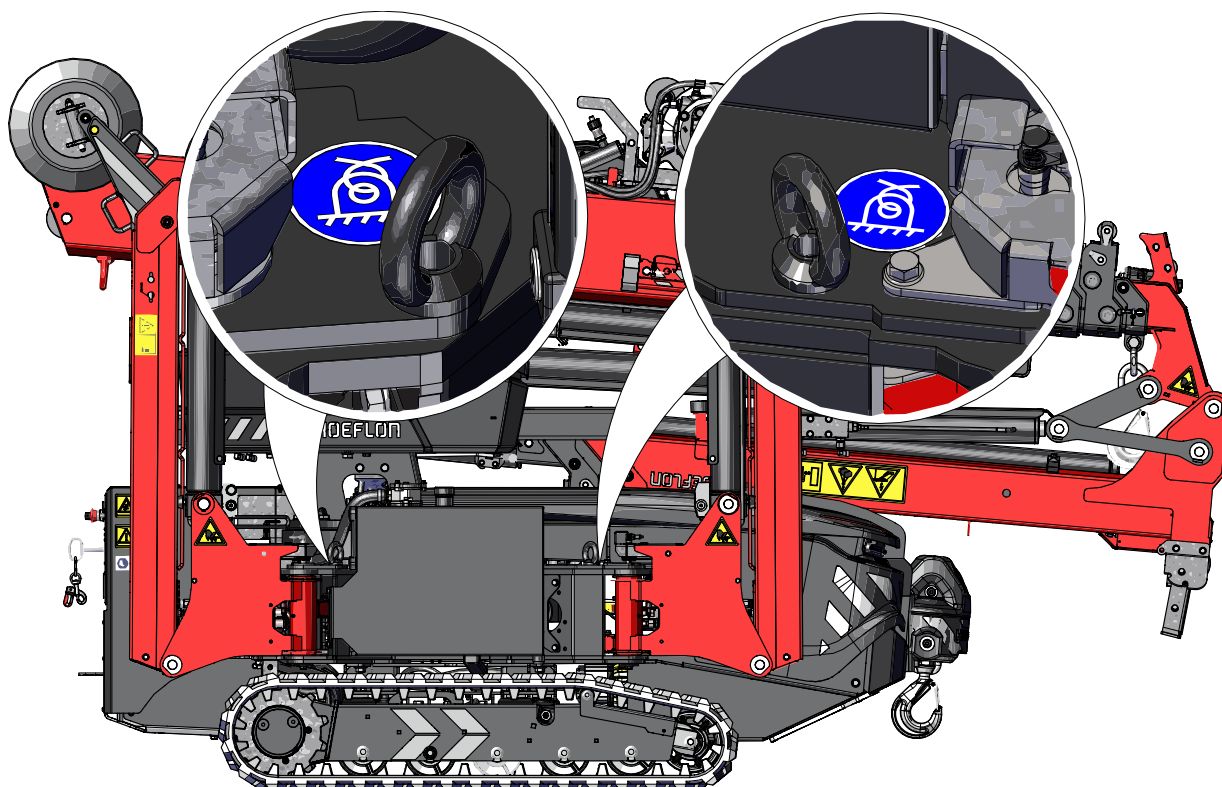
**Note**

Use an assistant when you move a compact crane up a ramp.

11.1.3 Securing the compact crane for transport

**Note**

Do not overload the brackets. This will damage the compact crane.



Point	Maximum load on attachment point
Lashing points on undercarriage	Front 1500 kg per eye Rear 2500 kg per eye

Put the crawler tracks of the compact crane directly on the deck of the transport vehicle.

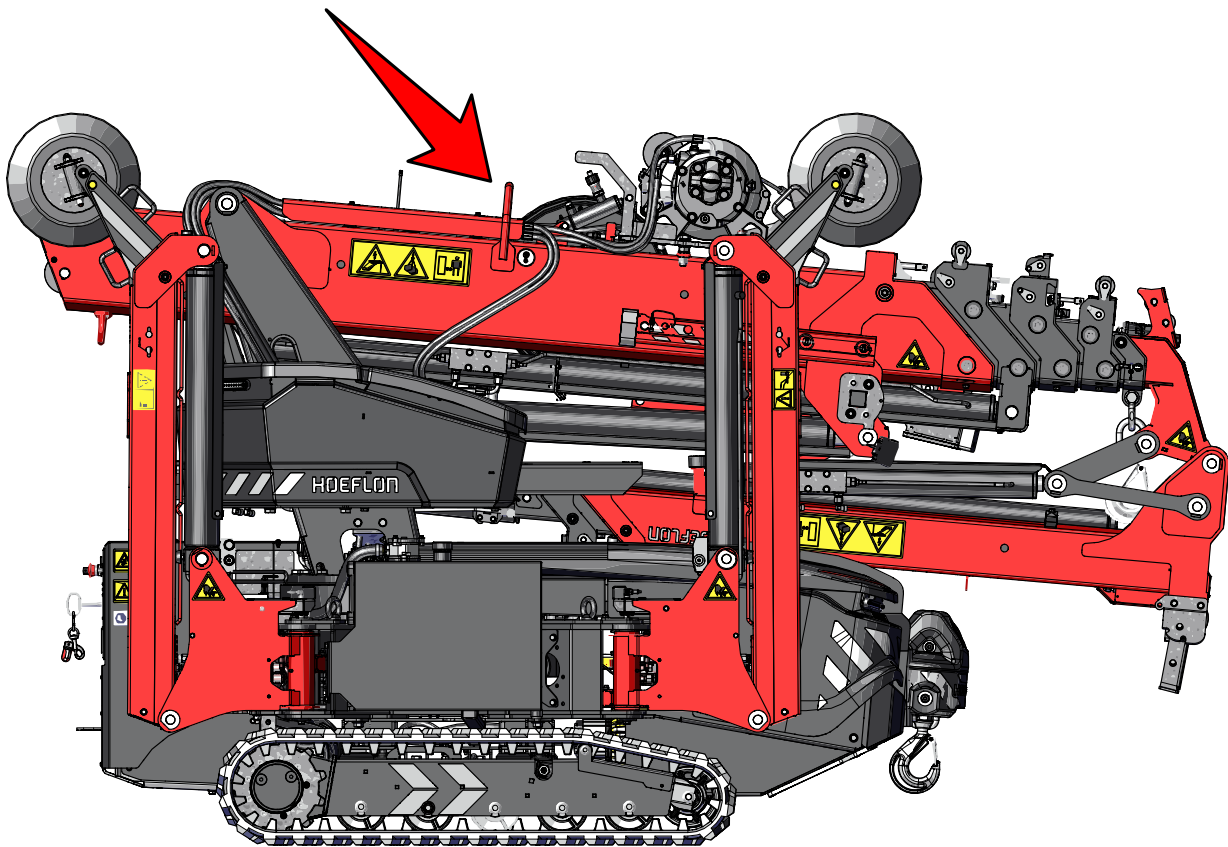
Secure the compact crane by attaching four lashing straps to the holes in the chassis (near the outrigger swivels). Use straps that are rated at:

- 0.5 x the compact crane's weight at the front and the sides.
- 1 x the compact crane's weight at the rear.

Fill the space between the front of the two crawler tracks and the headboard of the transport vehicle.

- If this is not possible then use lashing straps that are rated at 1.5 x the compact cranes weight at the rear.

11.2 Lifting the crane



Make sure that your lifting equipment is properly rated.

Put the crane into transport position before lifting the crane (see 11.1.1 Put the compact crane in the transport position)

11.3 Putting the compact crane in storage

1. Fully clean the compact crane.
2. Clean the track undercarriage with a pressure washer.
 - Do not point the pressure washer at electrical components.
3. Grease the compact crane (see 9.7 Lubrication)
4. Repair all damaged paintwork.
5. Apply a thin layer of grease to the parts that may rust.
6. Keep the compact crane in a dry and cool area with good airflow.
7. Keep the battery charger connected to the grid.
 - The batteries remain charged.
 - The batteries will not be damaged if they are left on the charger for a long time.

8. Make sure that only approved persons are permitted to enter the storage area.
9. Make sure that the compact crane cannot be started by unauthorized people.
10. Cover the compact crane with a tarpaulin.
 - Keep a section away from the ground for ventilation.

11.3.1 Putting the compact crane in storage without a charging facility

If the compact crane is put in storage without a charging facility nearby then you must inspect the battery voltage weekly.

**Note**

Make sure that the SOC is above 30%.

Charge the battery if the SOC is below 30% .

12.

Disposal

12.1 Dispose of the compact crane

Return the compact crane to your Hoeflon dealer at the end of its life.

12.2 Waste disposal



Note

Refer to local regulations when you discard waste material.

Incorrect disposal of waste is harmful to the environment.

Environmentally harmful waste includes but is not limited to:

- hydraulic oil,
- batteries,
- greases.

Appendix

HÖEFLON®

C6e gen 2

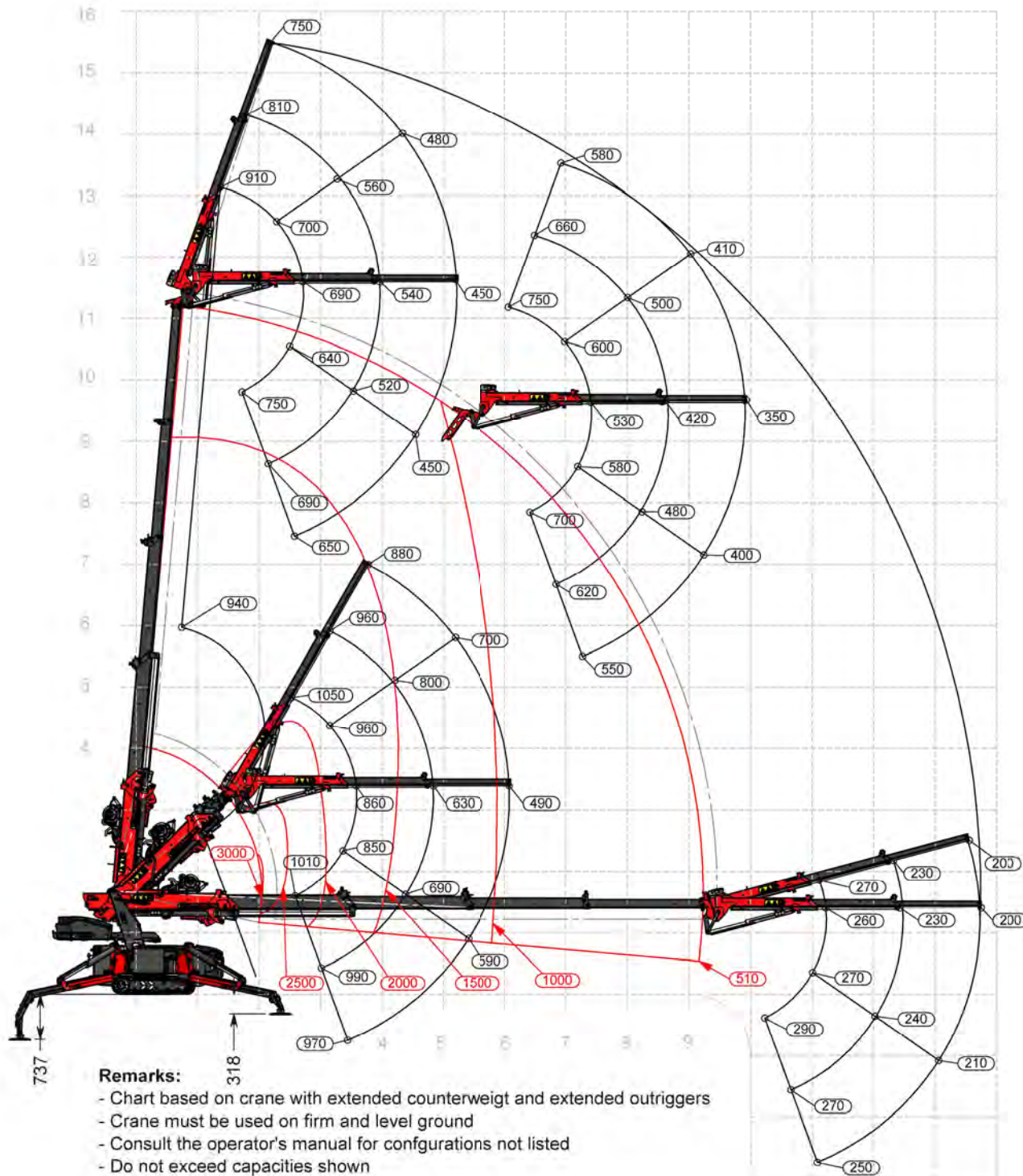
Max. boom load: 3.000 kg
 Max. boom angle: 85°

Max. fly-jib load: 1.050 kg
 Max. fly-jib angle: 70°
 Fly-jib mass: 160 kg

Max. winch cable force: 1.000 kg
 Crane mass, without fly-jib: 2.690 kg
 Counterweight mass: 500 kg

Wind speed limit: 6 Bft (40 km/h)
 Load surface: 1,2 m²/ton

Units: Metric (kg/m)



Remarks:

- Chart based on crane with extended counterweight and extended outriggers
- Crane must be used on firm and level ground
- Consult the operator's manual for configurations not listed
- Do not exceed capacities shown

