

User Guide

Multitool + MVS1000 / MC1200 / MF2000



Original instructions

Serial Number:

MT jib:

MC1200

MVS1000

MF2000

Delivery date:

Reference: U.MT.00.00.NL

Version: 1.0

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REVISION CONTROL

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1.0	01-05-2024		MT (jib) 2000 2862 MC1200 2000 2864 MVS1000 2000 2863 MF2000 2000 2861

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PREFACE

Thank you for buying the Hoeflon Multitool. 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 Multitool. In this user manual we will refer to it as the multitool.

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

You must fully understand how to use the compact crane before using the multitool with the compact crane.

Different types of vacuum lifter can be used with the multitool (see 3.5 Vacuum lifter). Instructions for the vacuum lifter are beyond the scope of this user guide. Read the user guide for your vacuum lifter for more information.

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 or to Hoeflon Support B.V..

Warranty and liability

The Hoeflon Multitool 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 multitool does have problems stop using the multitool and speak to your Hoeflon dealer or to Hoeflon Support B.V. immediately.

Use the multitool only for lifting loads as told in this user manual. Do not use the multitool in any other way.

Do not use the multitool if it is broken.

Do not use the multitool if:

- there is a problem with the compact crane,
- it is broken,
- there is an error,
- if there is a warning.

Repair the multitool or 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 multitool,
- repair the multitool yourself,
- use unauthorized replacement parts.

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

Target audience

This user guide is intended for everyone who works with or on the multitool.



Note

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

Make sure that you know how to operate the compact crane.

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

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 multitool.

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

Technical data gives the dimensions and specifications of the multitool.

Description describes the main components of the multitool and the operation of its various components.

Installation gives information on attaching each component.

Operation gives operating instructions for the intended use of the multitool.

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 multitool in storage.

Disposal gives instructions for the disposal of the multitool.

1.

Introduction



1.1 Intended use

Only use the multitool with a Hoeflon C6(e), a C10(e) or a C30e compact crane.

Only use the multitool for lifting and moving loads as described in this manual.

Only use on cranes that are prepared for your multitool by an authorized dealer.

1.2 Unintended use

Do not use the multitool:

- outside the permissible limits of the load chart,
- with a bypassed Rated Capacity Limiter (RCL),
- for tree care,
- to lift loads with:
 - an irregular cross-section or thickness,
 - a variable center of gravity,
 - an unknown weight.
- for prying, pushing or pulling,
- on cranes other than the cranes which are mentioned in chapter (see 1.1 Intended use)

1.3 EC Declaration

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

1.4 Type plate

A type plate containing the machine data is attached to the multitool. Do not remove the type plate . The CE mark indicates that the multitool conforms to the applicable standards for the European Economic Area.



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



Note

Please provide the type number and serial number when ordering parts.

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 and the multitool before you start work.

When using the multitool:

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

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

Only use the correct tools.

Keep the compact crane and the multitool 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 Support B.V. 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 the user guide of the compact crane for more information on the use of the 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 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).

- Hard hat
- Safety shoes
- Gloves
- Safety glasses

All operating personnel must:

- be fit to do the task.
- stay out of the operating radius of the crane.
- fully know the content of the user manual of the multitool.
- 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.

2.4 Work environment

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

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 multitool:

- If it is not safe,
- near high voltage cables,
- in an explosive environment.

2.5 During setup



Note

Make sure that the compact crane is setup correctly.

Move all the components of the compact crane and the multitool in all directions. Make sure that everything moves as expected.



Warning

Make sure that all parts move freely during installation.

If a part does not move freely tension can occur, the parts can then suddenly move with much force.

This can lead to loss of limb.

Use low gear and slow speed when you connect an attachment.



2.6 While working



Caution

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



Warning

Stop work and move the compact crane and the multitool 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 multitool to:

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

Prevent dangerous situations between:

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

Do not:

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

2.7 During lifting



Caution

Refer to the load chart in the appendix for the maximum load when you use the multitool.



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 at its center of gravity.
- Attach the load correctly.



Do not:

- Use the multitool if it is damaged or weakened.

Only move loads that:

- can move freely from the surface,
- are stable.

Make sure that there are no loose objects on:

- the crane,
- the multitool,
- 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 multiclaw has stopped moving.

- Do not make fast or sudden moves with the multiclaw.
- Sudden moves can cause the multiclaw to release the load without warning.
- The ends can hit something and can cause the multiclaw to release the load without warning.

2.9 While using the multiclaw



Caution

Be aware that the maximum load of the multiclaw is also limited by the maximum that the multiclaw can hold by the friction between the jaws.

Make sure that the clamping plates are dry and clean so that they keep a good hold on the load.

Make sure that the load is:

- Dry and clean so that it does not slip
- Strong enough so that it does not bend or crush

The stack light shows the pressure in the clamping cylinder. The pressure decreases slowly, see (see 4.7 Stack light) for more information.

2.10 Moving the crane

You must fully extend the ballast if you move a Hoeflon C6(e) compact crane with a multitool.






This is not necessary with a C10(e) or C30e

2.11 After work

- Remove the multitool and all attachments.
- Put the crane in transport position (see the user guide of the crane).

2.12 Pictograms

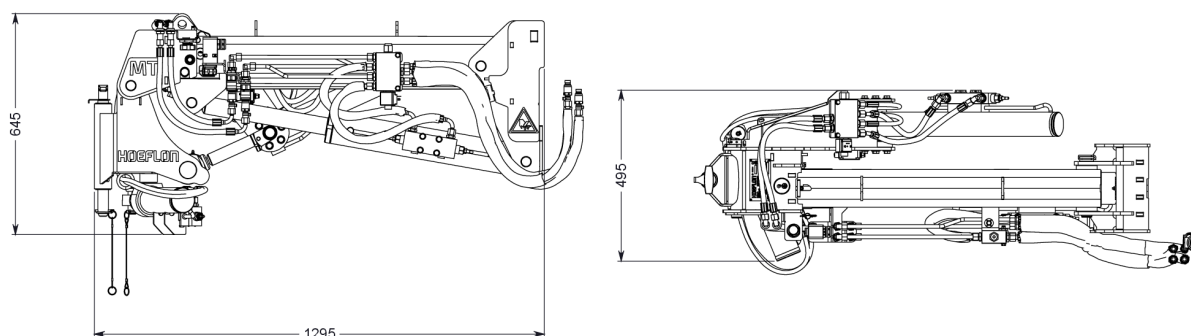
The pictograms used are shown below. Do not remove them. Replace a missing or damaged pictogram immediately!

Pictogram	Meaning	Location
	Lifting point for lifting the equipment.	On the multitool jib. On the two sides of the multiclaw. On the front of the pallet fork.
	Securing point of the multitool jib.	On the multitool jib. On the two sides of the multiclaw. On the two sides of the pallet fork.
	Entrapment hazard.	On various parts of the multitool .
	Read the user manual first.	On various parts of the multitool .
	Label that shows when annual inspection is due (Netherlands only)	On the Multitool jib - On the inside of the moveable head for the attachments. On the rotator drum - On the adapter for the vacuum lifter. On the multiclaw - On the rotator drum. On the pallet fork - On the pallet board

3.

Technical data

3.1 Multitool jib

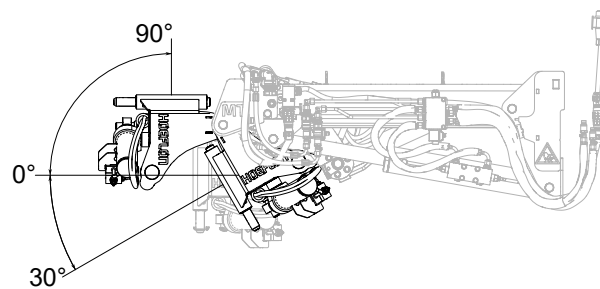
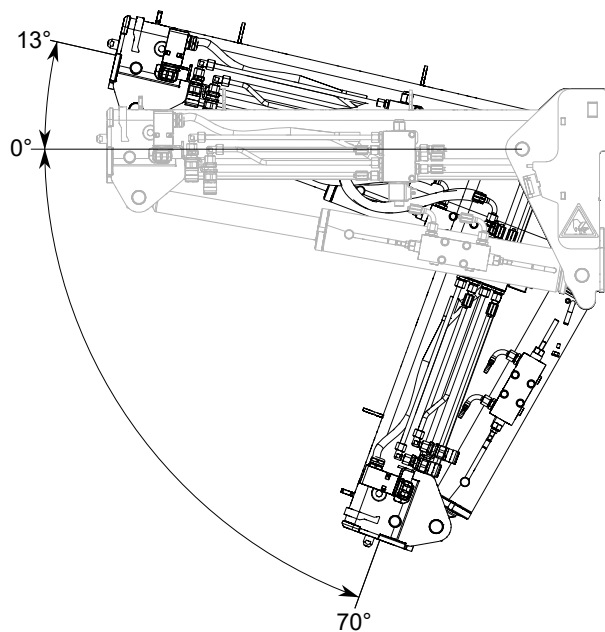


General data – Multitool jib	
Weight	145 kg
Weight C6 adapter	24 kg
Weight C10 adapter	28 kg
Maximum capacity	2000 kg ! Caution In some situations the maximum capacity of the multitool can be limited by the maximum capacity of the crane (see 2.7 During lifting)
Maximum operating pressure	250 bar
Suitable for use on	Hoeflon compact crane C30, C10, C6 with date of manufacture of 2018 or later. Speak to your dealer or to Hoeflon Support B.V. and make sure that the crane has the correct software.
Compatible attachments	<ul style="list-style-type: none">• Multiclaw (MC1200),• Pallet fork (MF2000),• Vacuum lifter adapter (MVS1000)

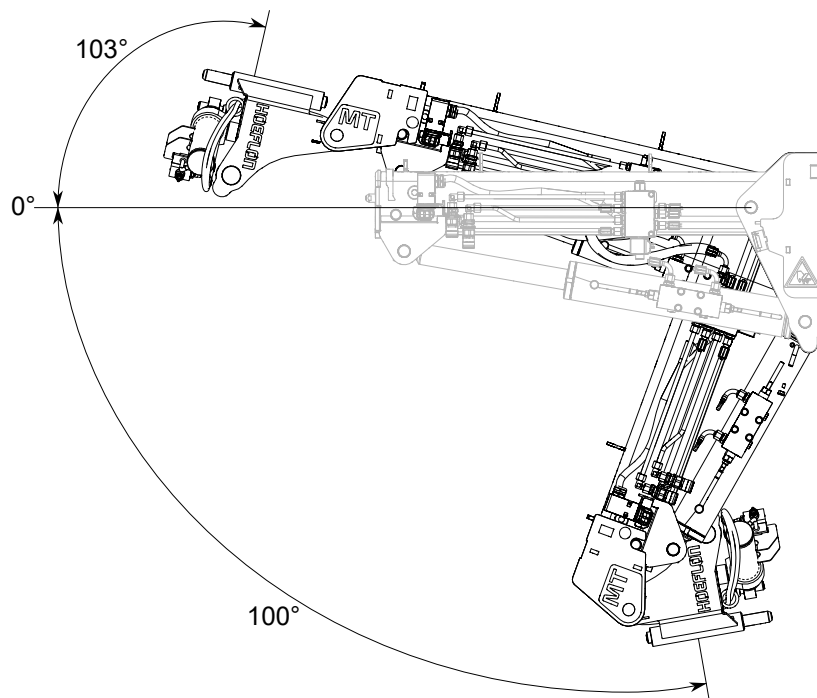
General data – Multitool jib

Connection voltage

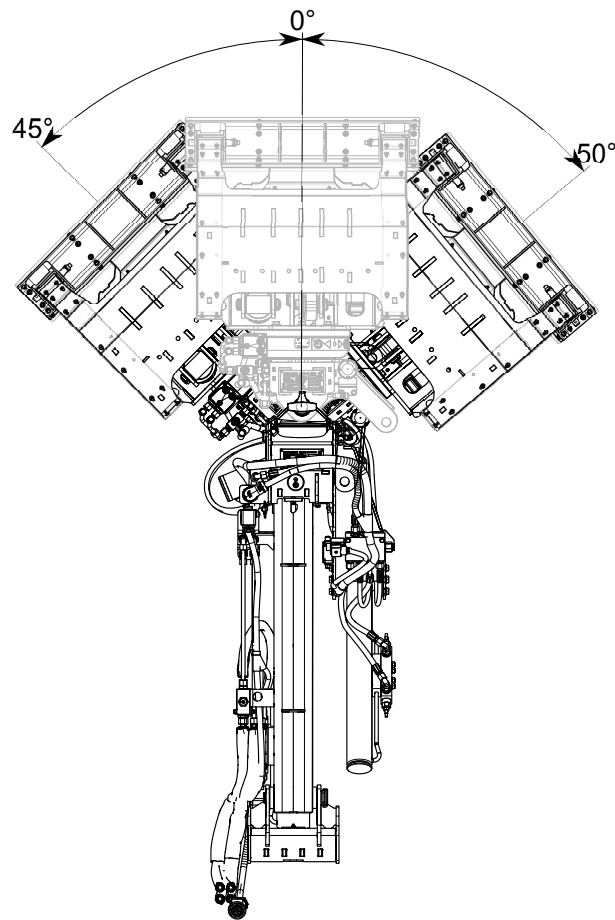
12-24 VDC

3.2 Limits of the multitool jib**3.2.1 Tilt limits**

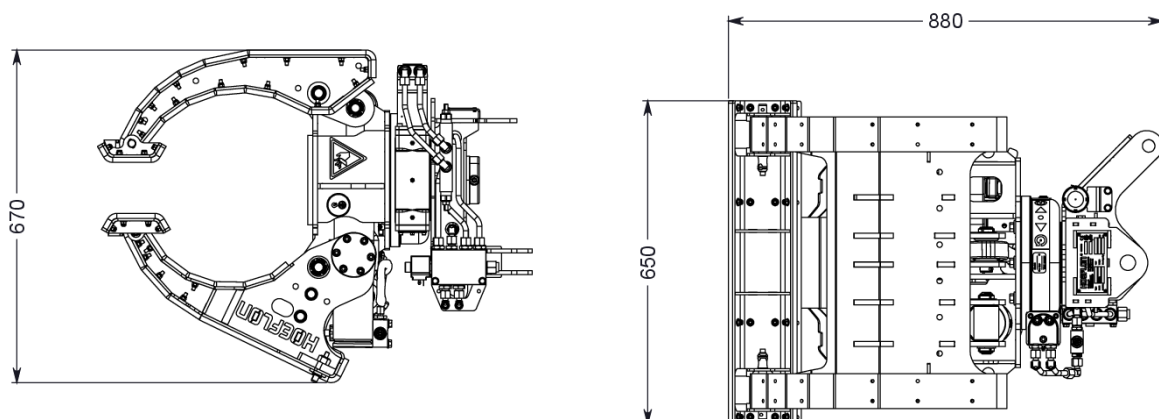
3.2.2 Total tilt limits



3.2.3 Slew limits

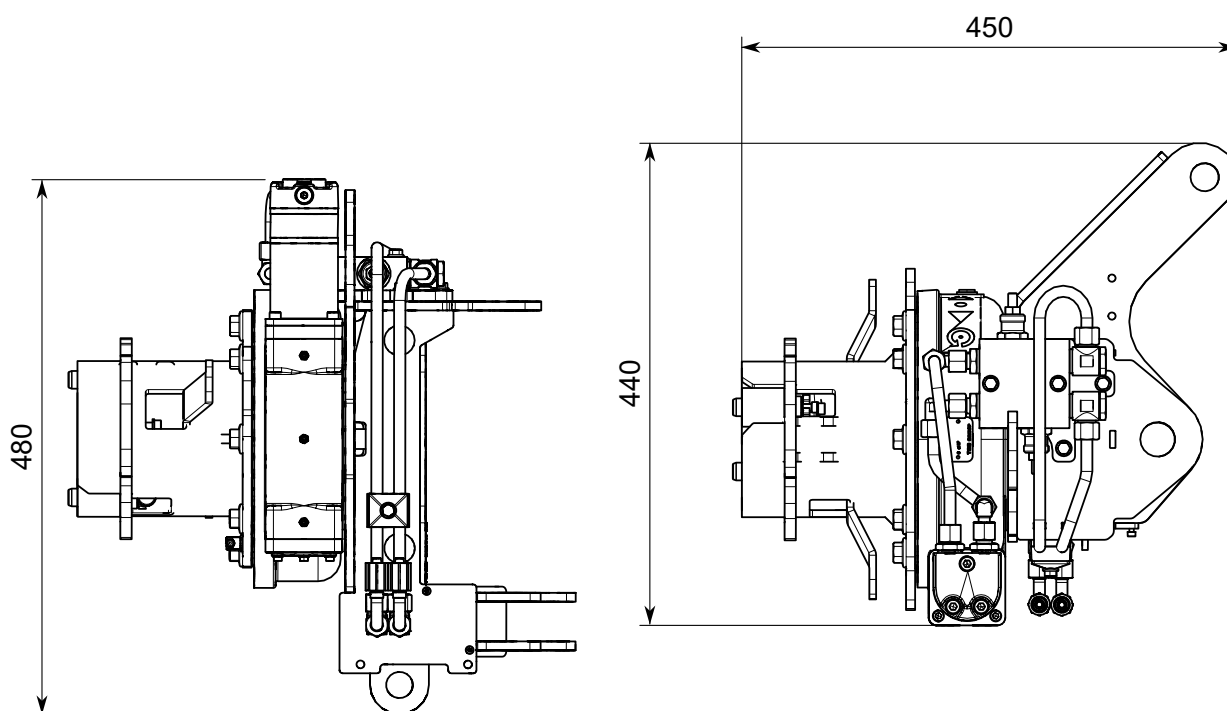


3.3 Multiclaw



General data – Multiclaw	
Weight	180 kg
Maximum clamping diameter	500 mm diameter
Maximum lifting capacity - beam clamp	1250 kg
Maximum lifting capacity - lower lifting eye	2000 kg
Rotation range	Endless

3.4 Vacuum lifter adapter



General data – Vacuum lifter adapter	
Weight	48 kg
Net lifting capacity	1000 kg
Maximum lifting capacity - lower lifting eye	1250 kg
Rotation range	Endless

3.5 Vacuum lifter

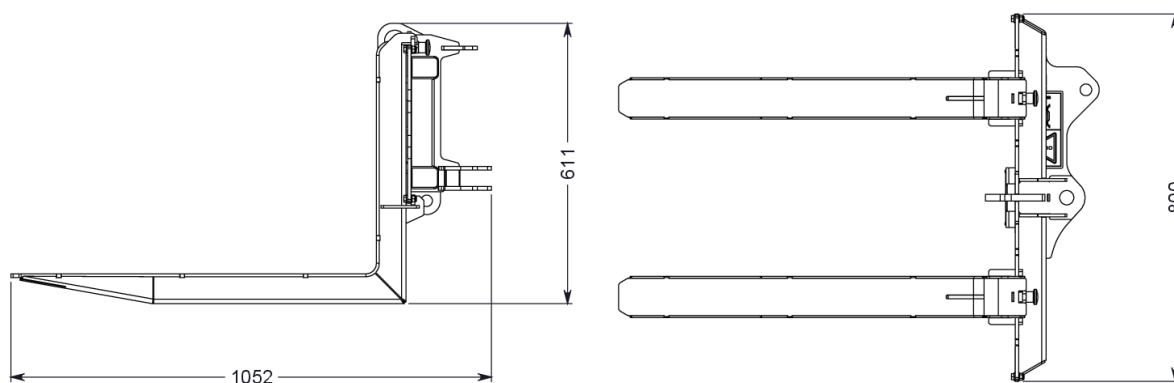


Caution

Only use a vacuum lifter that is approved by Hoeflon International B.V. with the multitool.

General data – Vacuum lifter	
Vacuum lifter brand	Grip Lifting
Weight	85 to 110 kg
Vacuum lifter type	S600, S800, S1000
Vacuum lifter dimensions (l x w x h)	S600: 2300 x 1000 x 190 mm S800: 2050 x 1250 x 190 mm S1000: 2450 x 1550 x 190 mm

3.6 Pallet fork

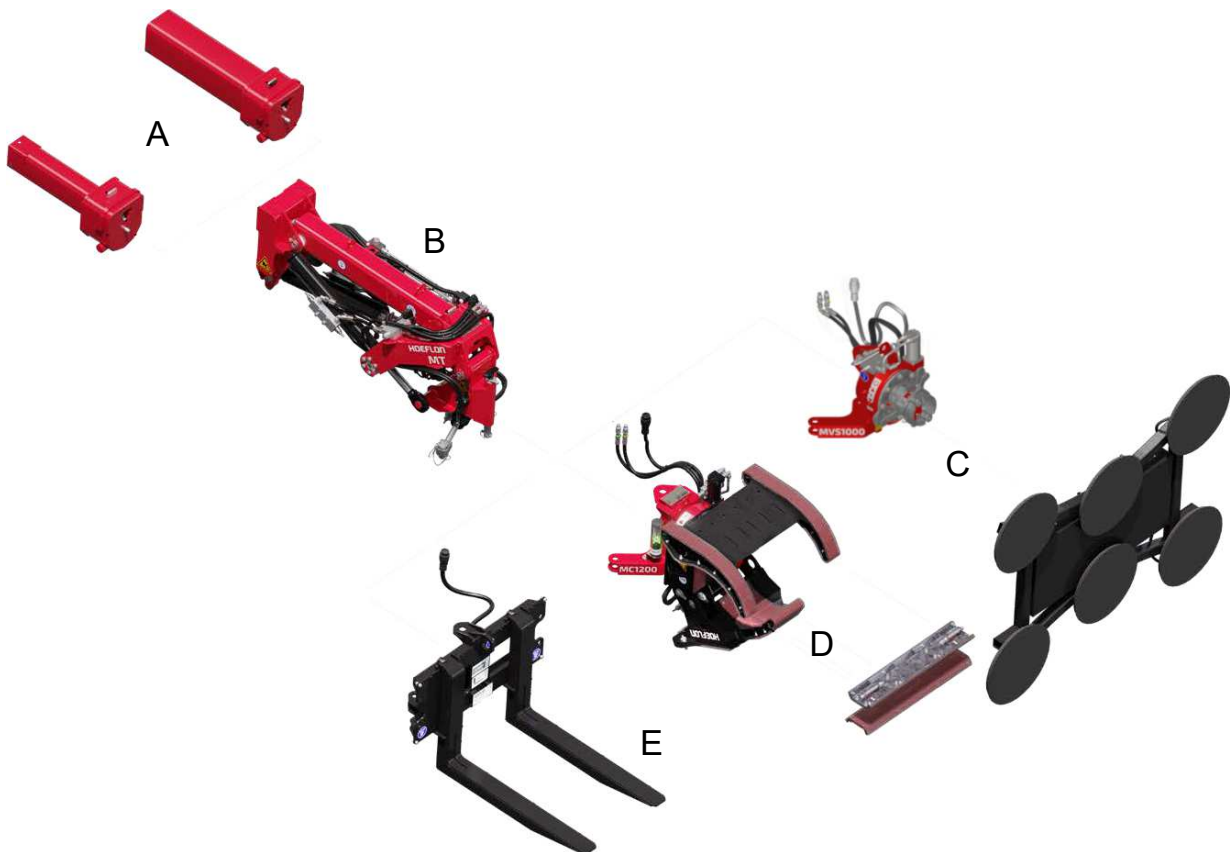


General data – Pallet fork	
Weight	64 kg
Net lifting capacity	2000 kg
Maximum lifting capacity - lower lifting eye	2000 kg
Maximum width	720 mm
Minimum width	320 mm
Tine length	800 mm
Tine width	90 mm

4.

Description

4.1 Multitool - Components



A. Adapters for C6 and C10 compact cranes

B. Multitool jib

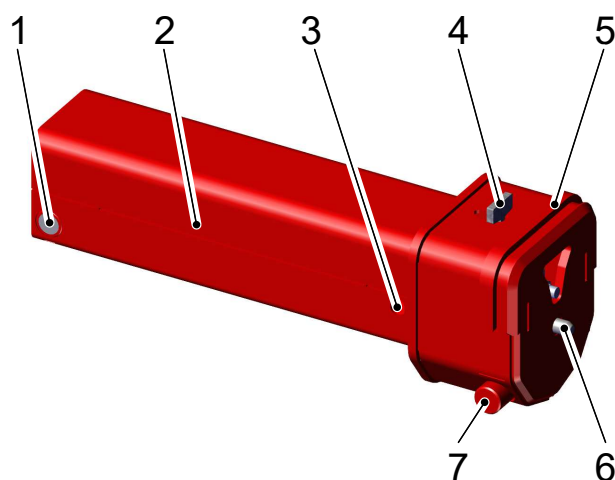
C. Adapter for vacuum lifter and vacuum lifter

D. Multiclaw and clamping plates

E. Pallet fork

The core of the multitool is the multitool jib. Use the multitool to add extra functionality to your Hoeflon compact crane. Use an attachment on the multitool to lift and move beams, pipes, plate glass and pallets.

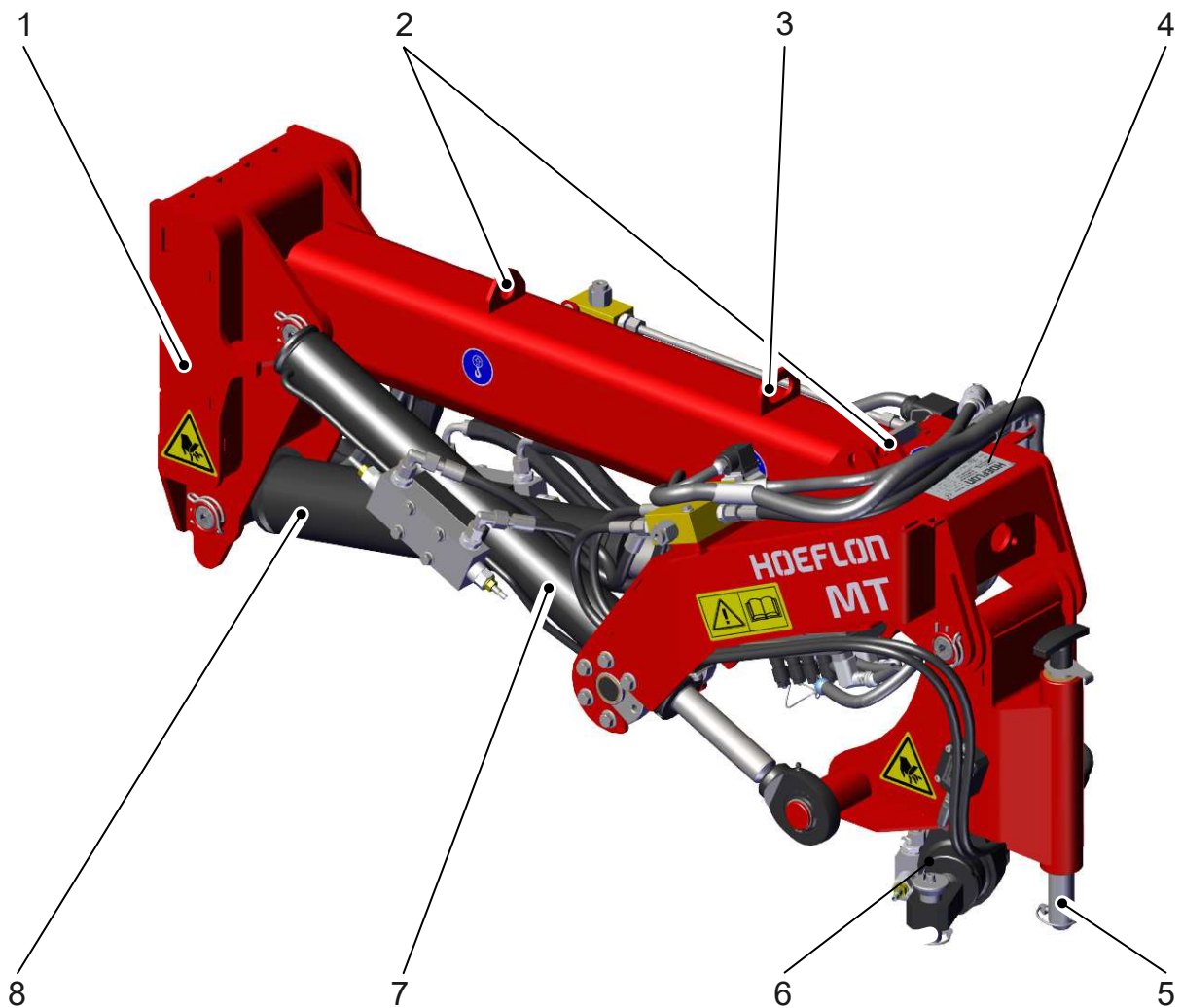
4.2 Adapters for C6 and C10 cranes



- | | |
|---------------------------------|---------------------------------------|
| 1. Adjustment cap | 5. Attachment ridge for multitool jib |
| 2. Boom connector | 6. Retainer pin |
| 3. Hole for attachment pin | 7. Attachment point for multitool jib |
| 4. Release for the retainer pin | |

Use an adapter to attach the multitool jib to the boom of the C6 and the C10 cranes. The multitool jib can be put directly on the boom of the C30 crane.

4.3 Multitool jib



1. Connection to crane / Quick connect

2. Lifting eyes

3. Lashing eye

4. Type plate

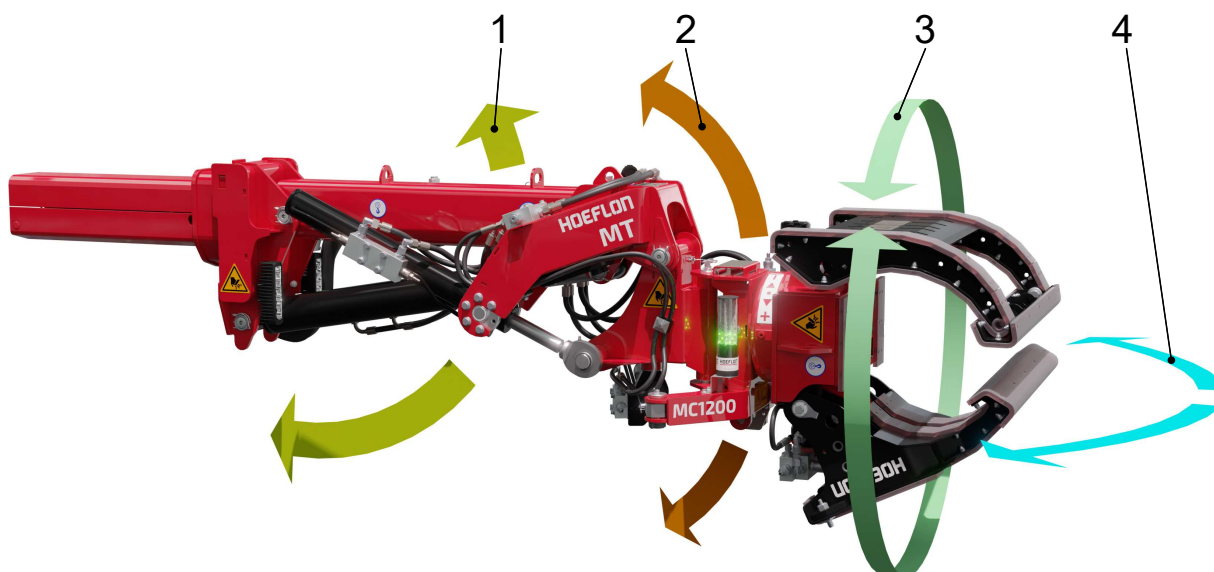
5. Connector pin for attachments

6. Slewing cylinder

7. Tilt cylinder

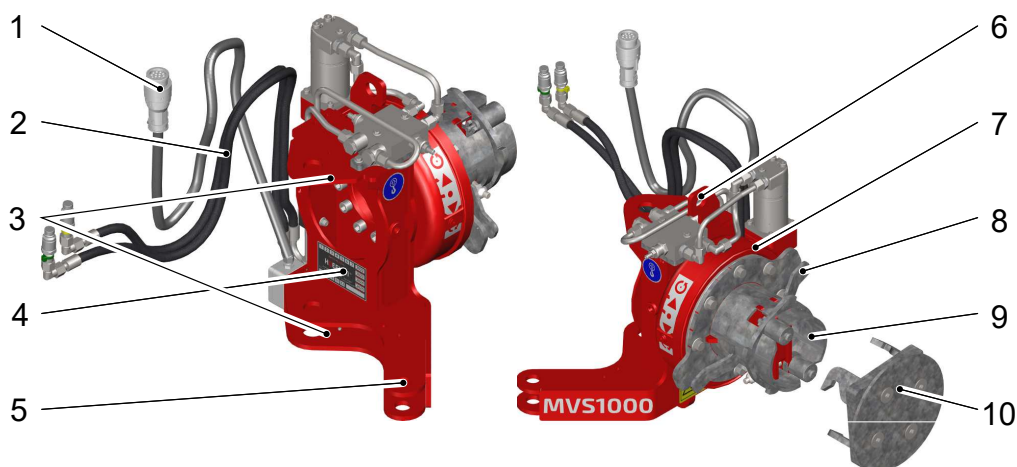
8. Lift cylinder

4.4 Movements of the multitool jib



1	Lift the attachment	Moves the attachment up and down. The distance of the attachment to the ground changes.
2	Tilt the attachment	Tilts the attachment up and down. The angle of the attachment to the ground changes.
3	Rotate the attachment	Rotates the attachment around its axis.
4	Slew the attachment	Slews the attachment to the left and right.

4.5 Adapter for the vacuum lifter (MVS1000)



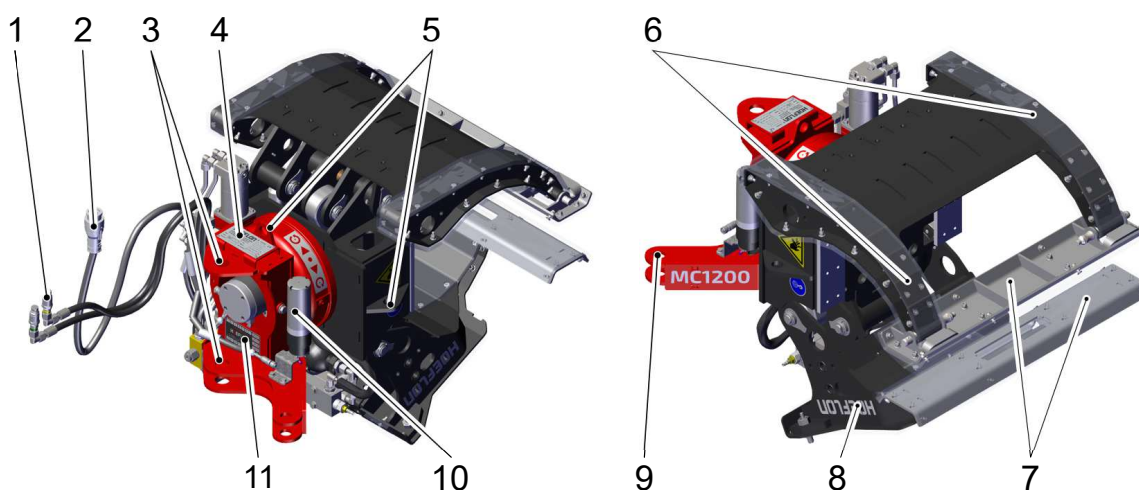
- | | |
|----------------------------------------------|--------------------------------------|
| 1. Electrical cable | 6. Lifting eye |
| 2. Hydraulic hoses | 7. Rotator |
| 3. Adapter to the multitool jib | 8. Locking lever |
| 4. Inspection sticker | 9. Connector for vacuum lifter |
| 5. Attachment point for the slewing cylinder | 10. Connector plate on vacuum lifter |

Use the adapter to connect the vacuum lifter to the multitool jib. The adapter provides additional freedom of movement for the vacuum lifter.

Use a vacuum lifter to lift and move flat, non-porous plate glass of medium to large size.

The vacuum lifter has its own user manual.

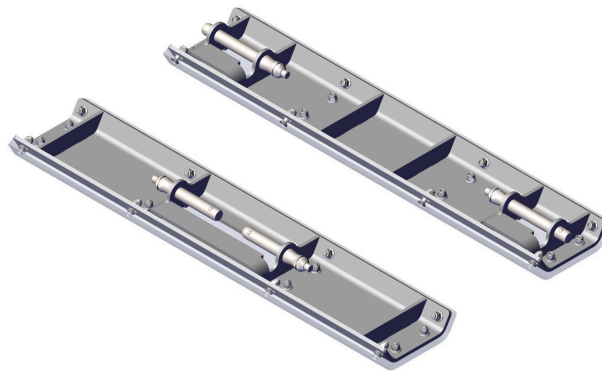
4.6 Multiclaw (MC1200)



1. Hydraulic hoses
2. Electrical cable
3. Connector to multitool jib
4. Type plate
5. Lifting eyes (3x)
6. Wide clamping jaw with two narrow fingers
7. Clamping plates
8. Narrow clamping jaw with single wide finger
9. Attachment point for slewing cylinder
10. Stack light
11. Inspection sticker

Use the multiclaw to clamp and move beams, pipes and items of equivalent shape.

4.6.1 Clamping plates



Install the clamping plates on the tips of the clamping jaws.

Use clamping plates to improve grip, distribute the clamping force or to reduce surface pressure.

4.7 Stack light

The stack light on the multitool shows the pressure in the clamping cylinder.



Note


The stack light does not show the clamping force that is applied by the multitool. The clamping force also depends on the angle of the jaws.



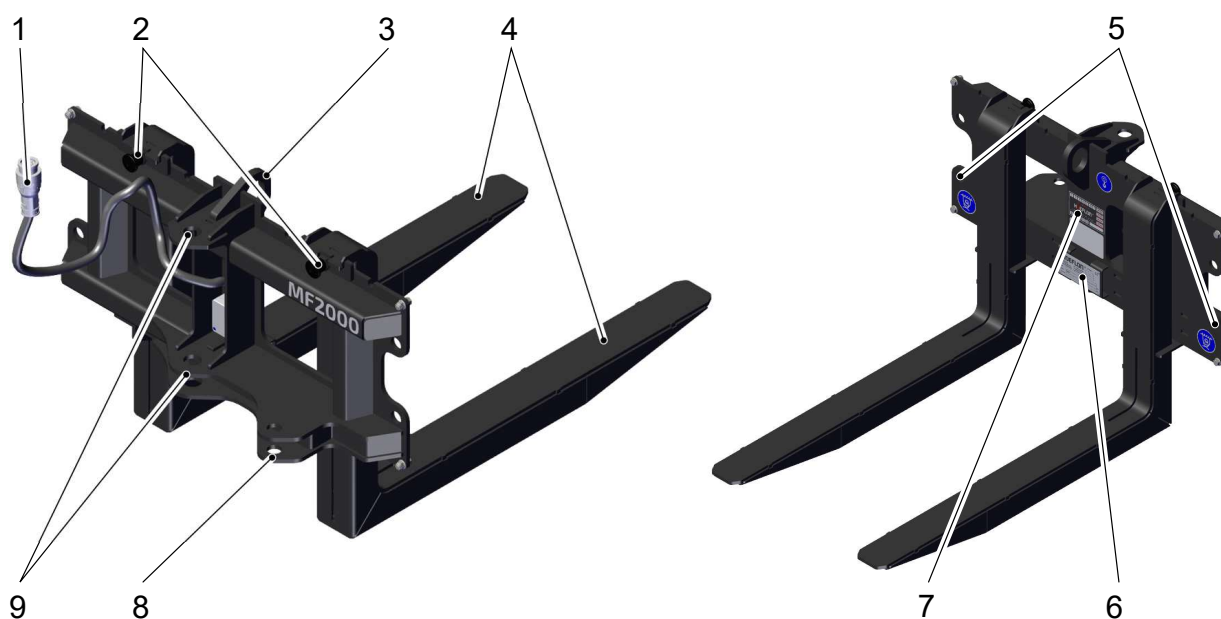
Note

Use the information from the stack light to make an estimate on how much clamping force is applied to the load.

- A PVC pipe > less clamping force
- A steel sheet > more clamping force

Lamp displays	Pressure in the clamping cylinder
Green LEDs are ON	60-100 bar
Green and Orange LEDs are ON	120-160 bar
Green, Orange and Red LEDs are ON	180-220 bar
The maximum clamping pressure is reached when all the LEDs are ON and an intermittent acoustic signal operates.	
Orange LEDs rotate, an intermittent acoustic signal operates on the compact crane and on the remote control	Unlock mode
Red LEDs only are ON, a continuous acoustic signal operates on the compact crane and on the remote control	<p>The pressure in the clamping cylinder decreases too much in a short time - without operation.</p> <p> WARNING</p> <p>Stop work immediately if you find any hydraulic leaks. Repair a leak immediately.</p> <p>Hydraulic oil under pressure can penetrate the skin.</p>

4.8 Pallet fork (MF2000)



- | | |
|------------------------------|------------------------------------------|
| 1. Electrical cable | 6. Inspection sticker |
| 2. Adjustment knob for tines | 7. Type plate |
| 3. Lifting eye | 8. Attachment point for slewing cylinder |
| 4. Tines | 9. Attachment point to multitool jib |
| 5. Lashing points (2x) | |

4.9 Remote control



Use the crane's remote control to operate the multitool. The functions of the levers on the remote control change when the multitool is connected. The remote control for the multitool also has a joystick.

This section gives the functions of the remote control when you use the multitool on a compact crane. Some operations cannot be done at the same time (see 6.1 Control limitations).

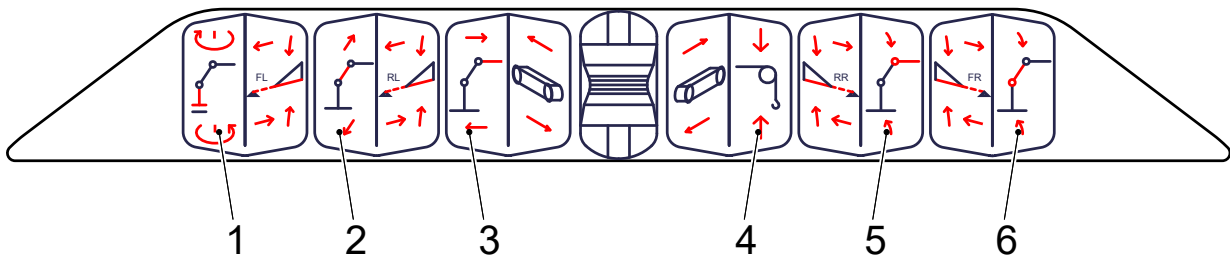
4.9.1 Levers






Note

The levers for the superstructure have a different function when you use the multitool. The operation of the undercarriage does not change when you use the multitool.

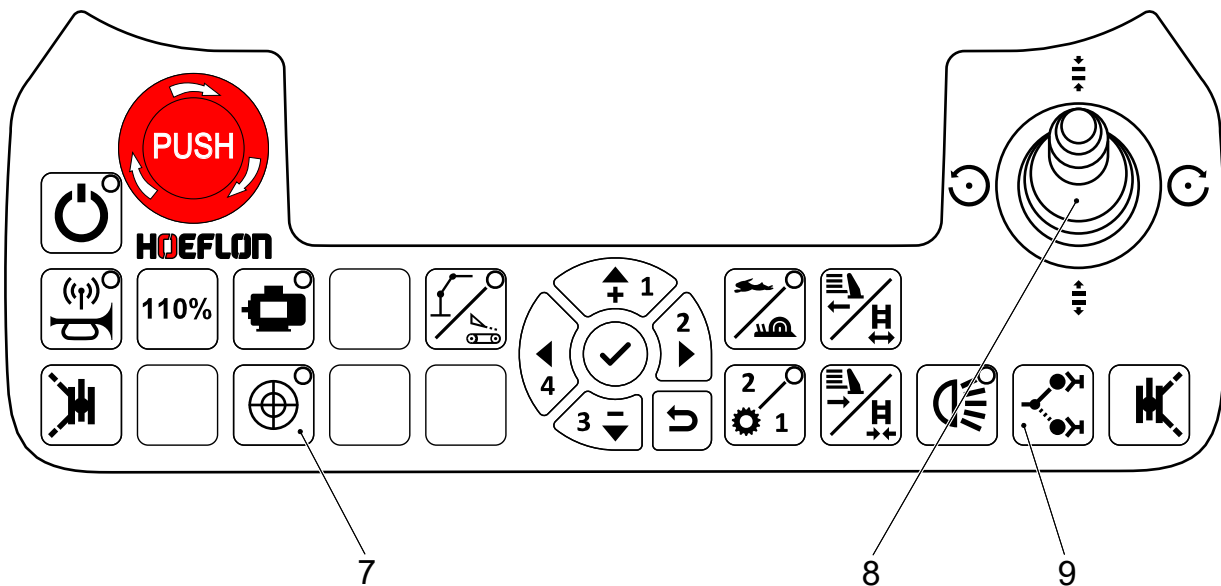
Only the levers for the superstructure with the multitool are explained. See the user guide of the compact crane for an explanation of the levers during use without the multitool.



Lever	Function	Lever backwards	Lever forwards
1	Slew boom	Left	Right
2	Extend / retract boom	Retract	Extend
3	Slew multitool attachment	Left	Right

Lever		Function	Lever backwards	Lever forwards
4		Tilt multitool attachment	Up	Down
5		Lift / lower multitool	Lift	Lower
6		Lift / lower boom	Lift	Lower

4.9.2 Buttons



No.	Button	Function	Explanation				
7		Auto level	<p>Toggles the auto level function of the multitool jib.</p> <table border="1"> <tr> <td>Auto level ON</td> <td>The attachment maintains its orientation to the ground when you tilt the boom or the multitool jib. Do not use lever 4 (Tilt multitool attachment (see 4.9.1 Levers) when you lift the multitool (with lever 5) or the boom (with lever 6). The attachment may not move correctly.</td> </tr> <tr> <td>Auto level OFF</td> <td>The attachment maintains its orientation to the multitool jib when you tilt the boom or the multitool jib.</td> </tr> </table>	Auto level ON	The attachment maintains its orientation to the ground when you tilt the boom or the multitool jib. Do not use lever 4 (Tilt multitool attachment (see 4.9.1 Levers) when you lift the multitool (with lever 5) or the boom (with lever 6). The attachment may not move correctly.	Auto level OFF	The attachment maintains its orientation to the multitool jib when you tilt the boom or the multitool jib.
Auto level ON	The attachment maintains its orientation to the ground when you tilt the boom or the multitool jib. Do not use lever 4 (Tilt multitool attachment (see 4.9.1 Levers) when you lift the multitool (with lever 5) or the boom (with lever 6). The attachment may not move correctly.						
Auto level OFF	The attachment maintains its orientation to the multitool jib when you tilt the boom or the multitool jib.						
8	Joystick	Multiclaw operation	<ul style="list-style-type: none"> - Close: Joystick forwards - Open: Joystick backwards and press Lock/unlock function button once. - Rotate left: Joystick left - Rotate right: Joystick right 				
		Vacuum lifter operation	<ul style="list-style-type: none"> - Rotate left: Joystick left - Rotate right: Joystick right 				
9		Lock/unlock function	<p>Push this button once and move the joystick to unlock the multiclaw. After 10 seconds of no movement, the button must be pressed again.</p> <p>Orange LEDs rotate, an intermittent acoustic signal operates on the compact crane and on the remote control</p>				

5.

Installation

5.1 Preparing the crane (C6 and C10 only)



Note

Upgrade the crane's software.

Speak to your Hoeflon dealer

5.2 Using the adapters (C6 and C10 only)



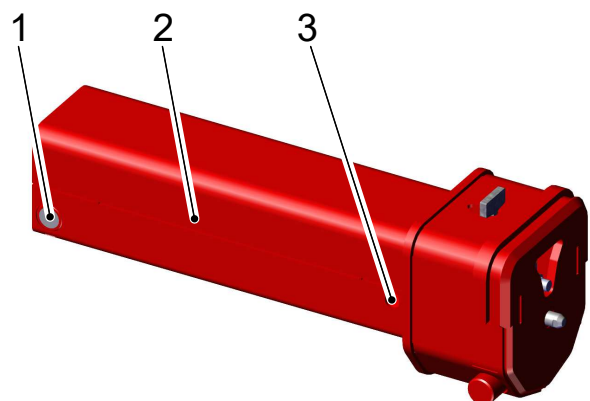
Note

You can attach the multitool jib directly to the boom of the C30 compact crane.

You will need to use an adapter to attach the multitool jib to the boom of a C6 or C10 compact crane.

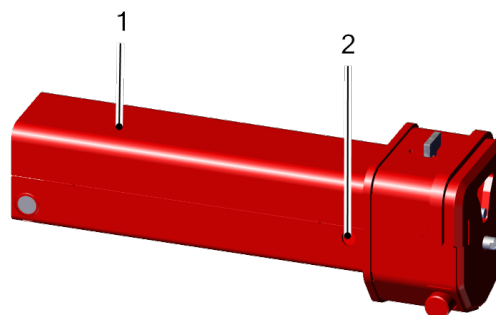
5.2.1 Attaching an adapter

1. Use the adjustment caps (1) in the open end of the adapter to remove any gap between the adapter and the last boom tube.
 - a. Measure the inside width of the boom.
 - b. Turn the two adjustment caps so that:
 - the total length is a few mm shorter than the inside of the boom.
 - the adjustment caps are extended equally.
2. Move the adapter (2) into the boom of the crane.
3. Move the boom attachment pin through the holes (3).
4. Lock the attachment pin with the locking pin.

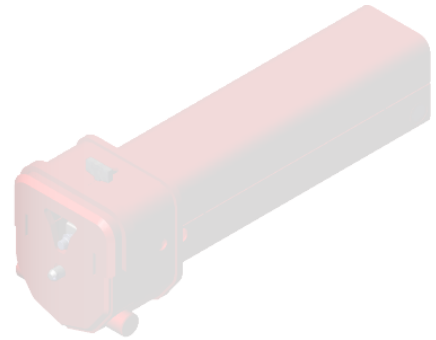
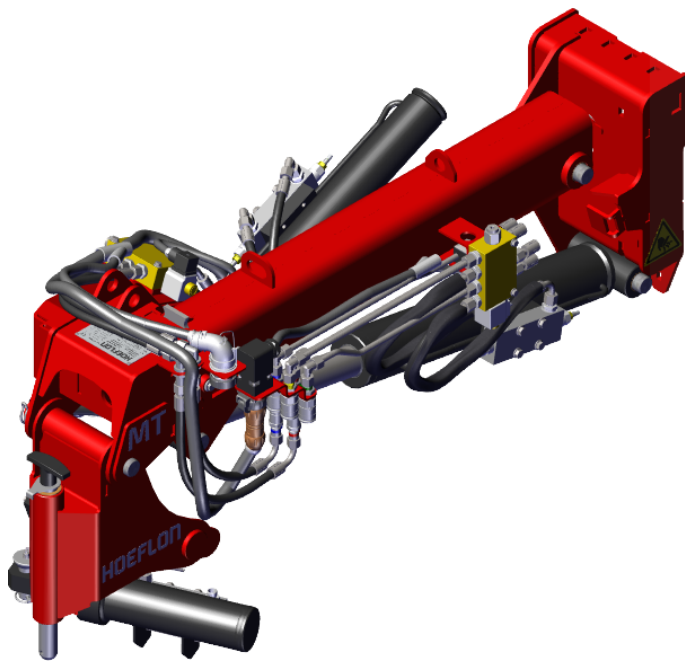


5.2.2 Removing an adapter

1. Remove the locking pin from the boom attachment pin.
2. Move the boom attachment pin out of the holes (2).
3. Move the adapter out of the boom (1) of the crane.



5.3 Attaching the multitool jib to the boom or an adapter



Warning

Make sure that all parts move freely during installation.

If a part does not move freely tension can occur, the parts can then suddenly move with much force.

This can lead to loss of limb.



Caution

Use the SLOW setting when you install or remove an implement from the crane.

1. Hang the multitool jib from a sling.

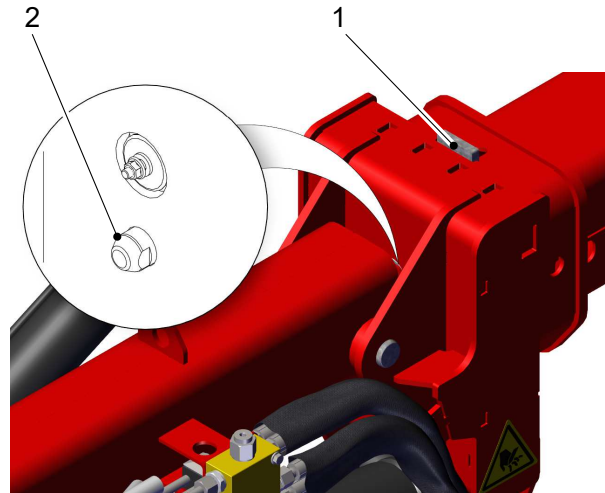


Note

Use the two lifting lugs on the top of the multitool jib.

2. Lower the boom so that the boom head is below the attachment point of the multitool jib.
3. Slowly extend the boom for attachment.

4. Pull the release (1) back and then sideways.
 - Make sure that the release goes into the slot.
5. Make sure that the retainer pin is retracted into the boom or the adapter.
6. Slowly raise the boom until it lifts the multitool jib.
7. When the boom is fully attached to the multitool jib:
 - Move the release out of its slot.
 - Move the release forward.
 - Make sure that the release the retainer pin (2) engages in the multitool jib.



8. Connect the electrical connector to the connector on the boom.
9. Connect the four hydraulic hoses of the multitool jib to the couplings at the front of the boom.

**Note**

Make sure that you connect matching colors together.

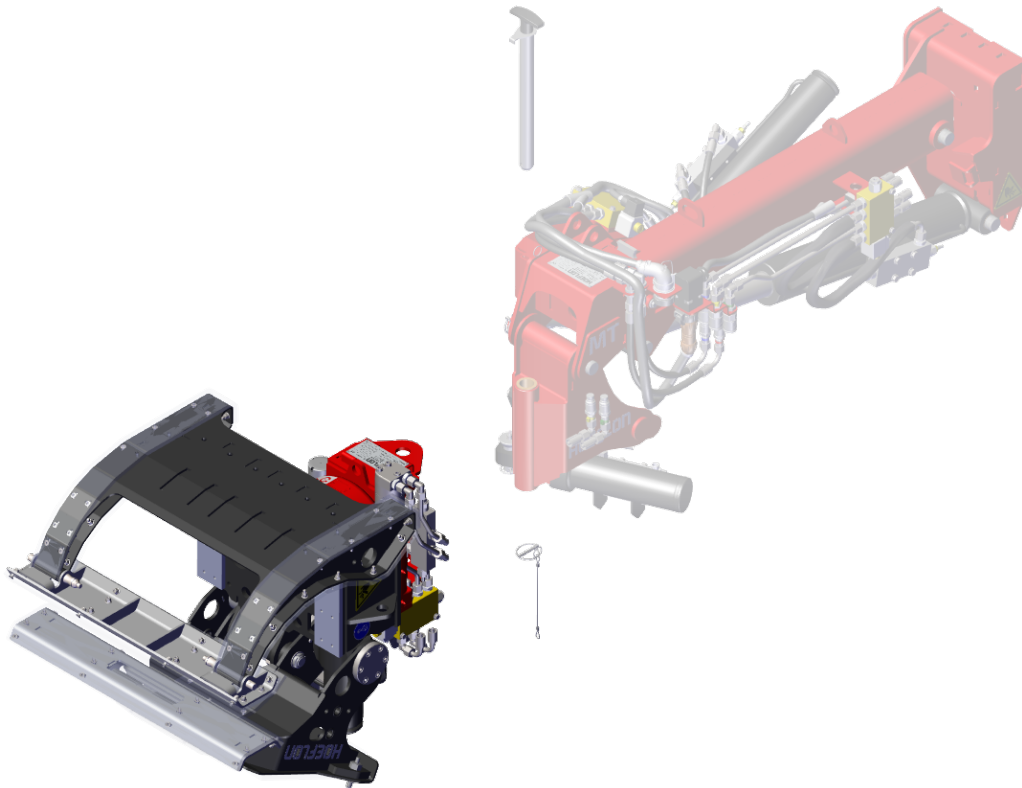
**Note**

Do a check of all the movements of the multitool. Make sure that everything moves as expected.

**Note**

Make sure there is enough oil in the hydraulic oil tank.

5.4 Attaching the multiclaw



Warning

Make sure that all parts move freely during installation.

If a part does not move freely tension can occur, the parts can then suddenly move with much force.

This can lead to loss of limb.



Caution

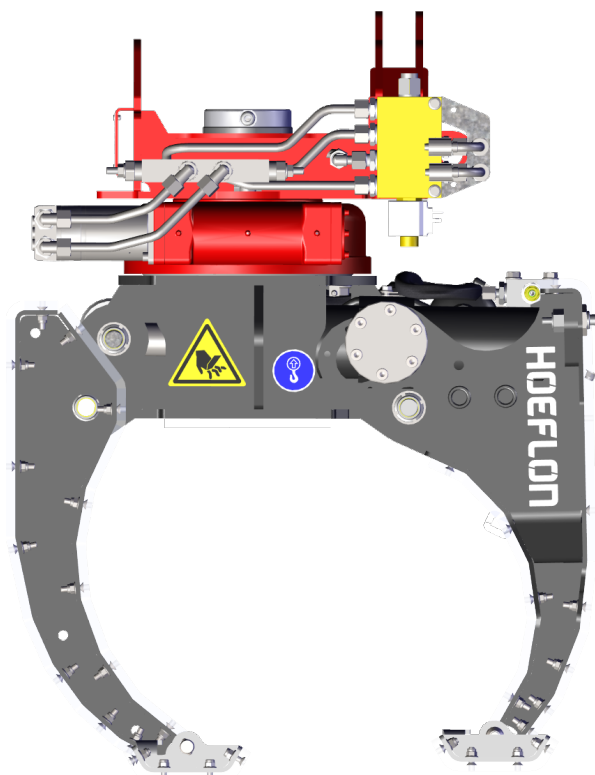
Use the SLOW setting when you install or remove an implement from the crane.



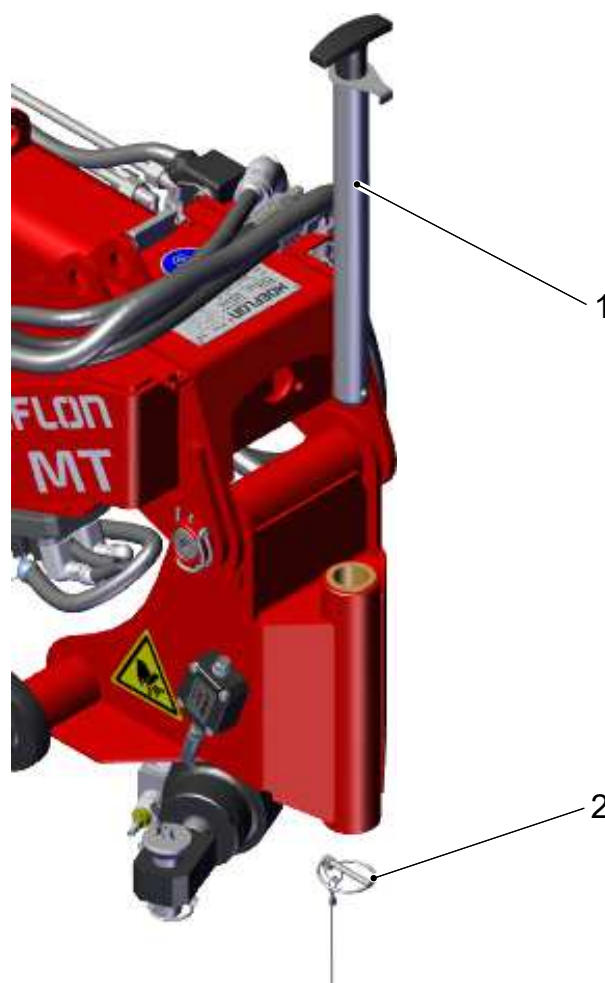
Note

Only use a hammer that has a soft face.

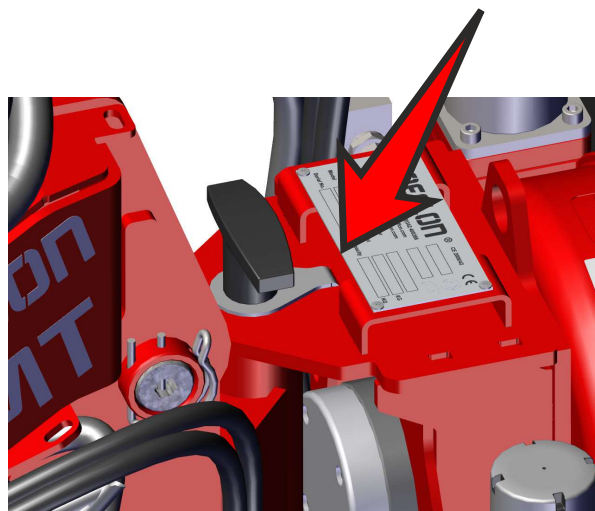
1. Make sure that the multiclaw is positioned correctly.



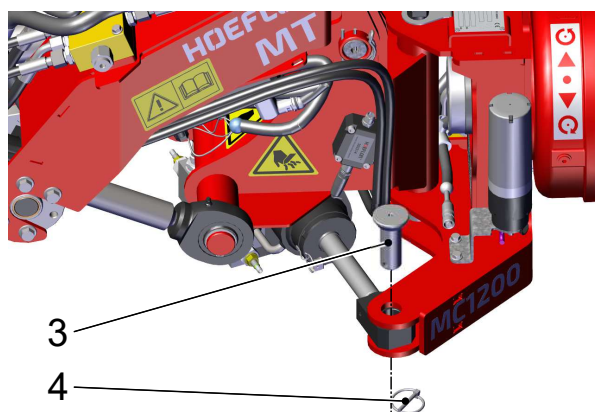
2. Remove the lynch pin (2) from the bottom of the locking pin (1).
3. Remove the locking pin.
4. Slowly lower the multitool jib with the boom and move it into the adapter of the multiclaw.



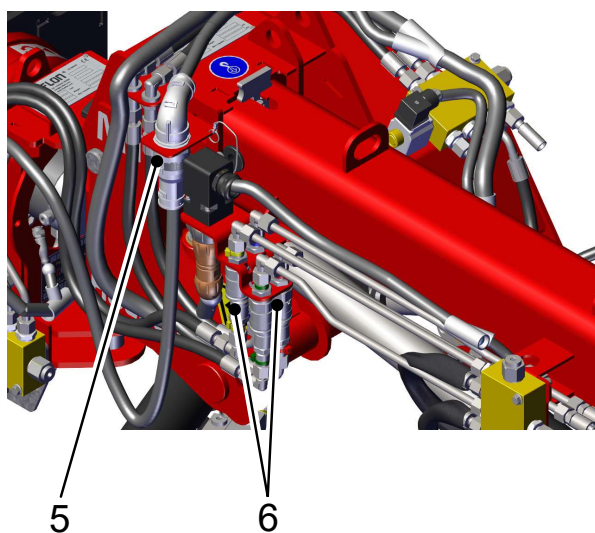
5. Move the locking pin (1) back into the opening to attach the multiclaw to the multitool jib
 - Make sure that the lip on the locking pin goes into its slot in the attachment.
6. Safety the locking pin (1) with the lynch pin (2).



7. Remove the lynch pin (4) from the bottom of the attachment point for the slewing cylinder and pull out the attachment pin (3).
8. Attach the cylinder bush of the slewing cylinder with the pin.
9. Safety the attachment pin.



10. Connect the electrical connector (5) to the multitool jib.
11. Connect the two hydraulic hoses of the multiclaw (6) to the couplings on the front of the multitool jib.



Note

Make sure that you connect matching colors together.



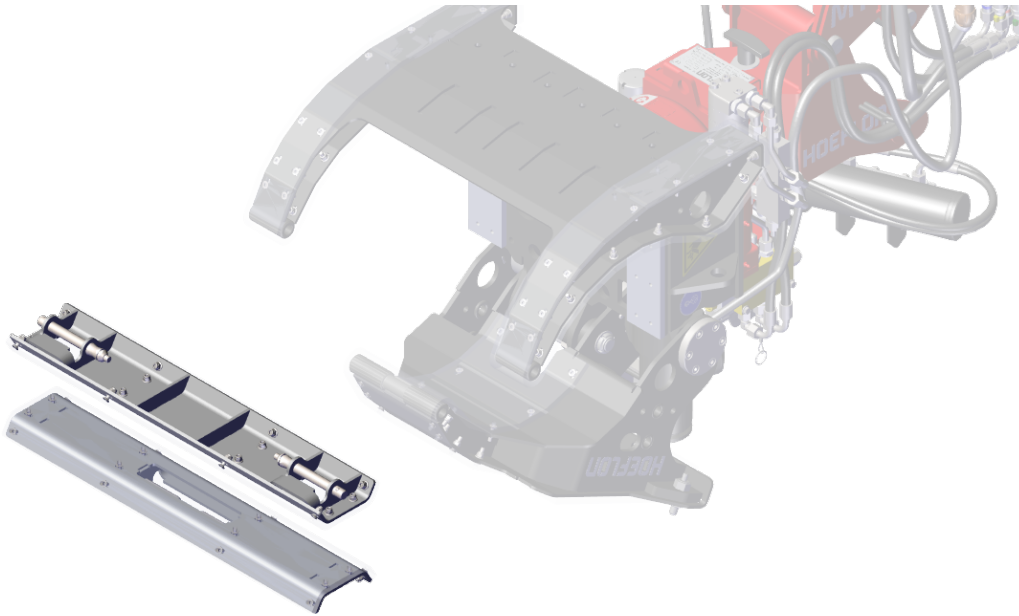
Note

Do a check of all the movements of the multitool. Make sure that everything moves as expected.

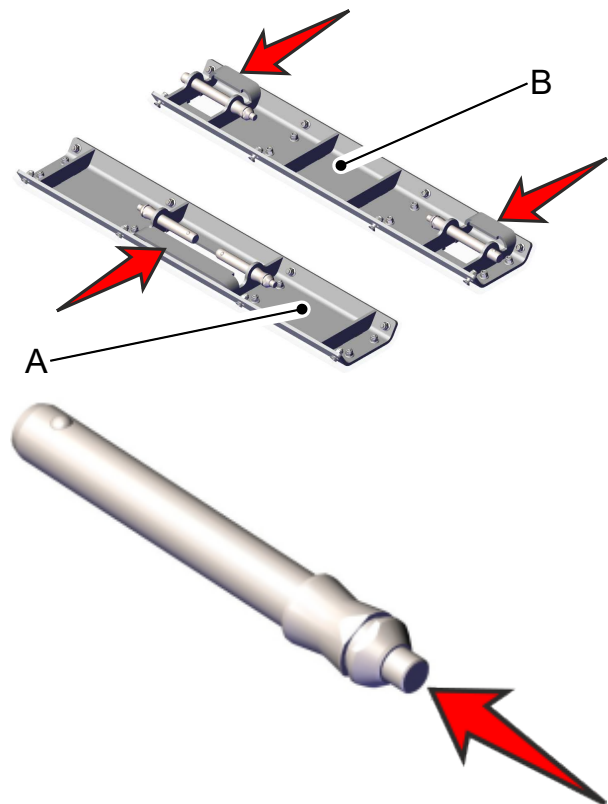
**Note**

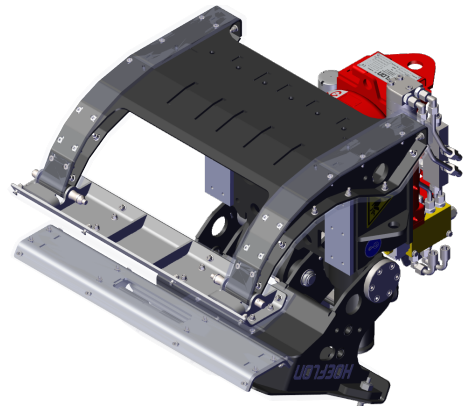
Make sure there is enough oil in the hydraulic oil tank.

5.4.1 Attach clamping plates



1. Attach the clamping plates in the correct position on the clamping jaws.
2. Put clamping plate A on the single wide jaw. Put plate B on the two thin jaws.
 - Make sure that the swing limiter plates (arrows) are on the outside.
3. Push the button on the end of the pin. The steel balls on the other side retract and you can push the pin in position (or remove it).





5.5 Removing the multiclaw



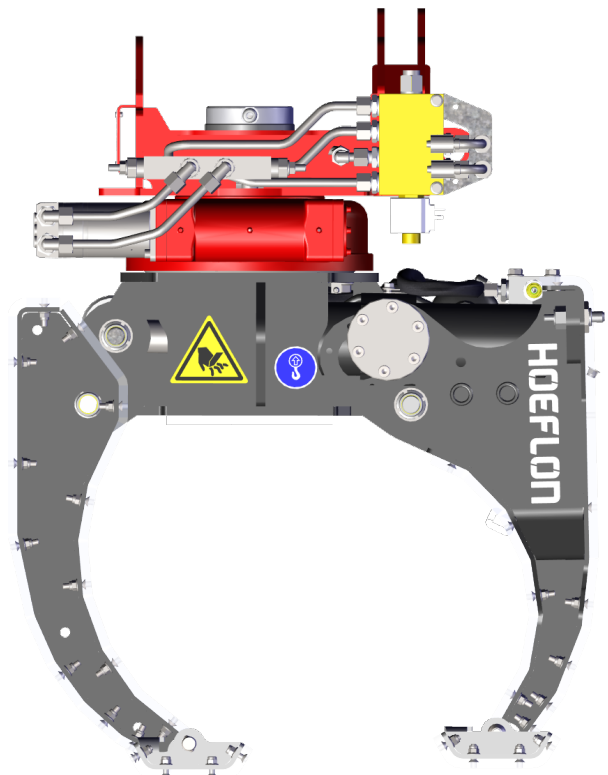
Warning

Make sure that there is no tension on **any** part.

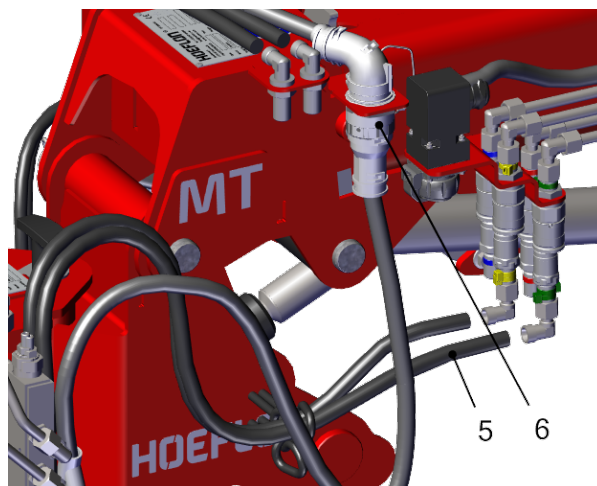
If there is tension on any part, then the parts can suddenly move with much force.

This can lead to loss of limb.

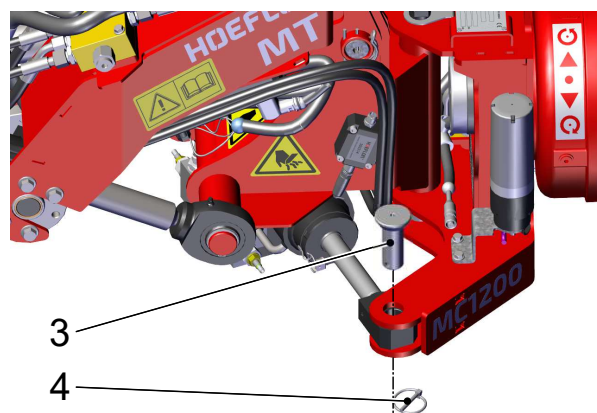
1. Put the multiclaw on the ground in the storage position.
 - Make sure that the multiclaw is perpendicular to the ground.
 - Open the jaws of the multiclaw.
 - Put the multiclaw on the open jaws.



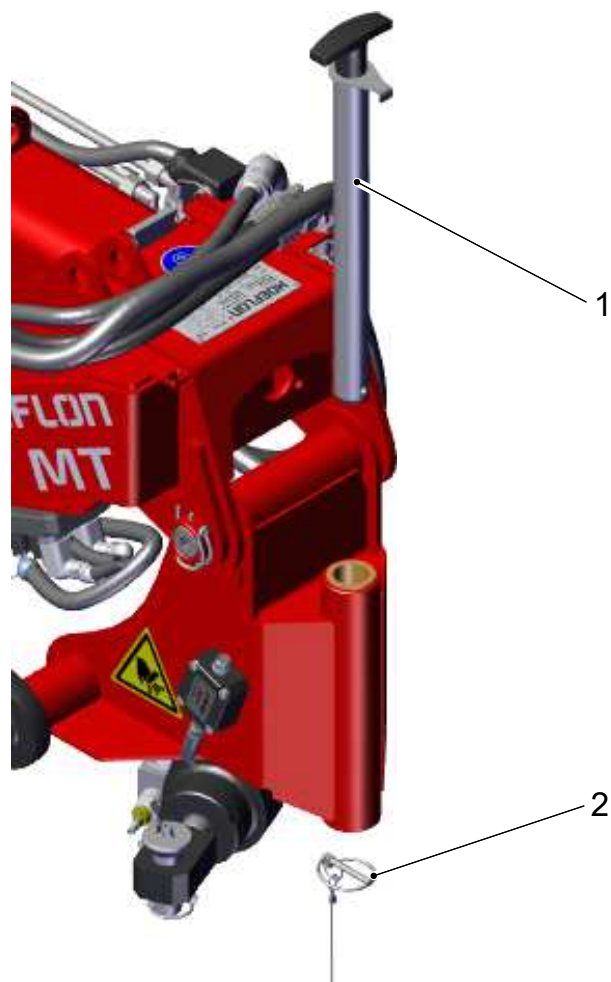
2. Disconnect the hydraulic hoses (5) and the electrical connector (6) from the multiclaw.



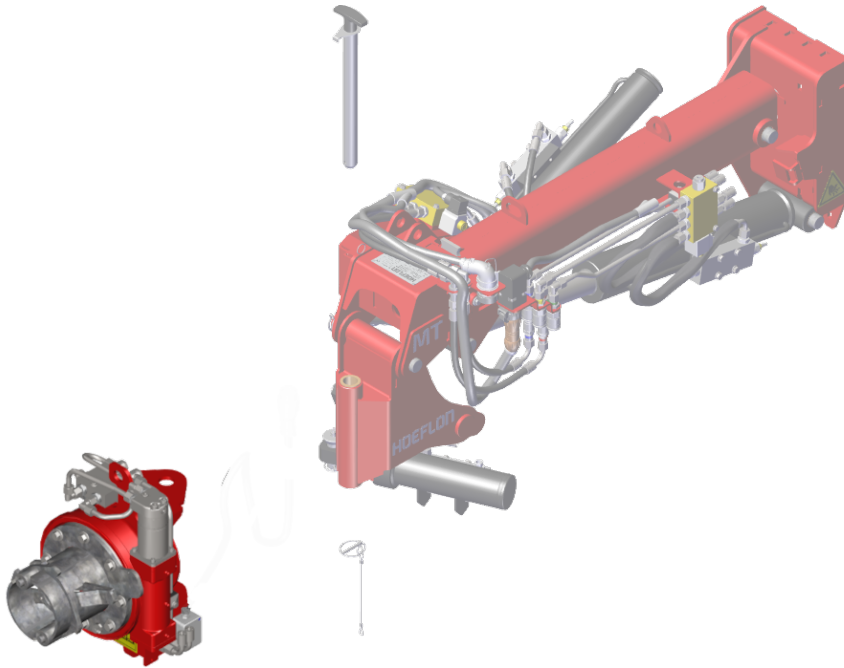
3. Remove the lynch pin (4) from the bottom of the attachment pin for the slewing cylinder
4. Remove the attachment pin (3).
5. Pull the cylinder bush out of the bracket.
6. Put the attachment pin back into the cylinder and put the lynch pin in the attachment pin.



7. Remove the lynch pin (2) from the bottom of the locking pin (1) and remove the locking pin.
8. Slowly move the multitool jib up until the multiclaw is free.
9. Put the locking pin (1) back into the jib and put the lynch pin (2) in the locking pin.



5.6 Attaching the adapter for the vacuum lifter

**Warning**

Make sure that all parts move freely during installation.

If a part does not move freely tension can occur, the parts can then suddenly move with much force.

This can lead to loss of limb.

**Caution**

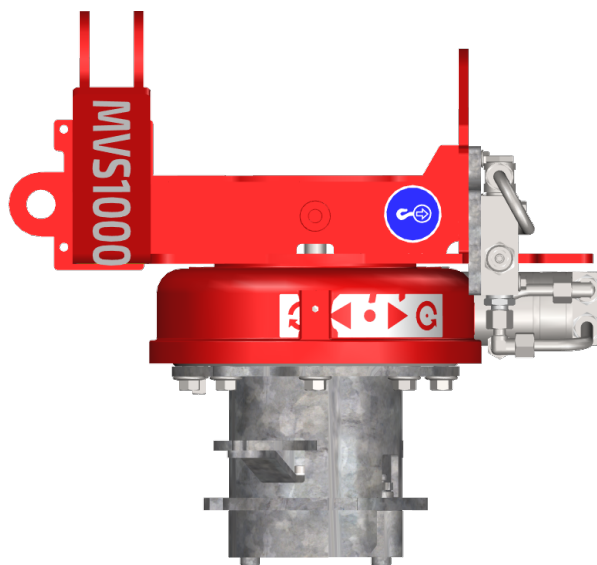
Use the SLOW setting when you install or remove an implement from the crane.

**Note**

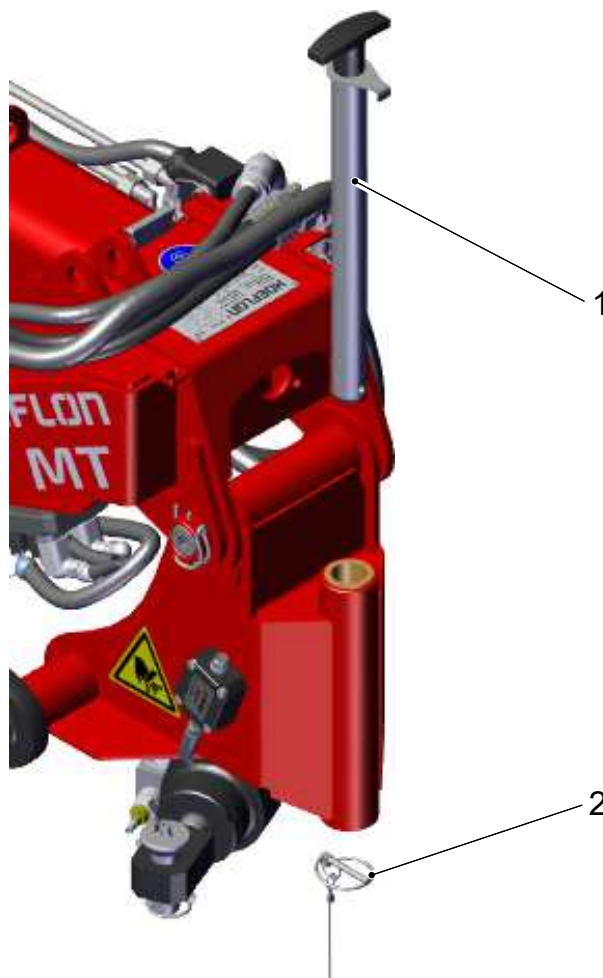
Only use a hammer that has a soft face.

Use the adapter for the vacuum lifter to attach the vacuum lifter to the front of the multitool jib.

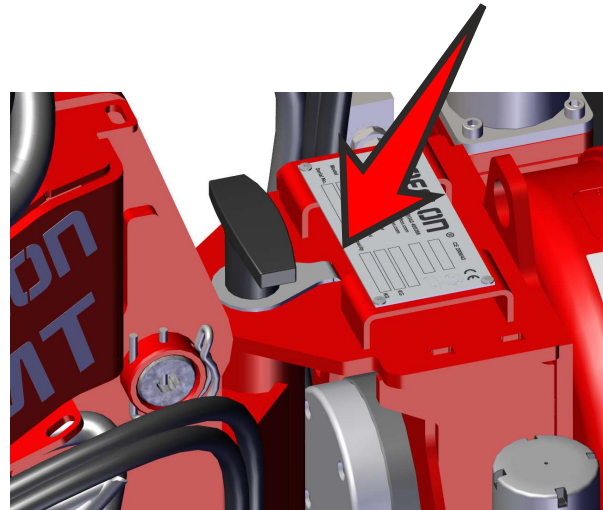
1. Make sure that the adapter is positioned correctly.



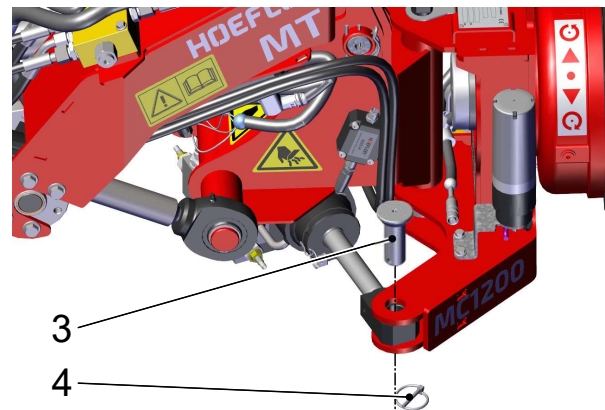
2. Remove the lynch pin (2) from the bottom of the locking pin (1).
3. Remove the locking pin.
4. Slow lower the multitool jib with the boom and move it into the adapter for the vacuum lifter.



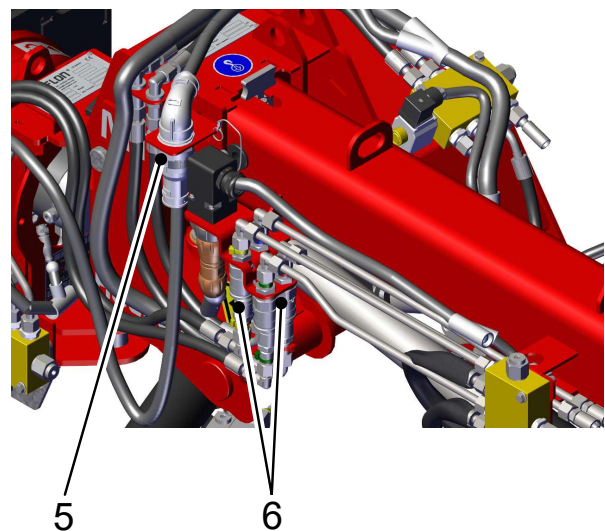
5. Move the locking pin (1) back into the opening attach the adapter for the vacuum lifter to the multitool jib
 - Make sure that the lip on the locking pin goes into its slot in the attachment.
6. Safety the locking pin (1) with the lynch pin (2).



7. Remove the lynch pin (4) from the bottom of the attachment pin (3) for the slewing cylinder.
8. Remove the attachment pin (3).
9. Attach the cylinder bush of the slewing cylinder with the pin.
10. Safety the attachment pin.



11. Connect the electrical connector (5) to the multitool jib.
12. Connect the two hydraulic hoses of the adapter (6) to the couplings on the front of the multitool jib.

**Note**

Make sure that you connect matching colors together.

**Note**

Do a check of all the movements of the multitool. Make sure that everything moves as expected.



Note

Make sure there is enough oil in the hydraulic oil tank.

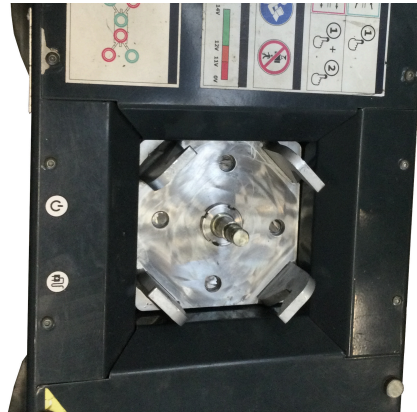
5.6.1 Preparing the vacuum lifter



Note

Make sure that vacuum lifter has the correct adapter for the multitool.

Your Hoeflon dealer will install this adapter.

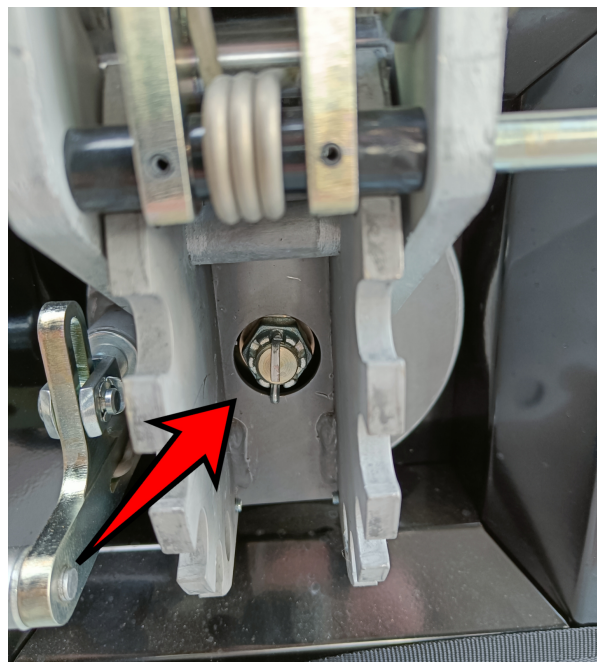


Note

If a manual jib extension is installed then you must remove it first.



1. Remove the split pin.
2. Remove the nut.
3. Remove the bush (not shown in photo).
4. Remove the manual jib extension.



5. The vacuum lifter is now ready for the adapter.

**Note**

Install the manual jib extension in the reverse order.

- Use a new split pin (3,2 x 28 mm) to secure the castle nut.
- Tighten the nut with your hand.
- Loosen the nut so that the split pin goes through the first available hole.

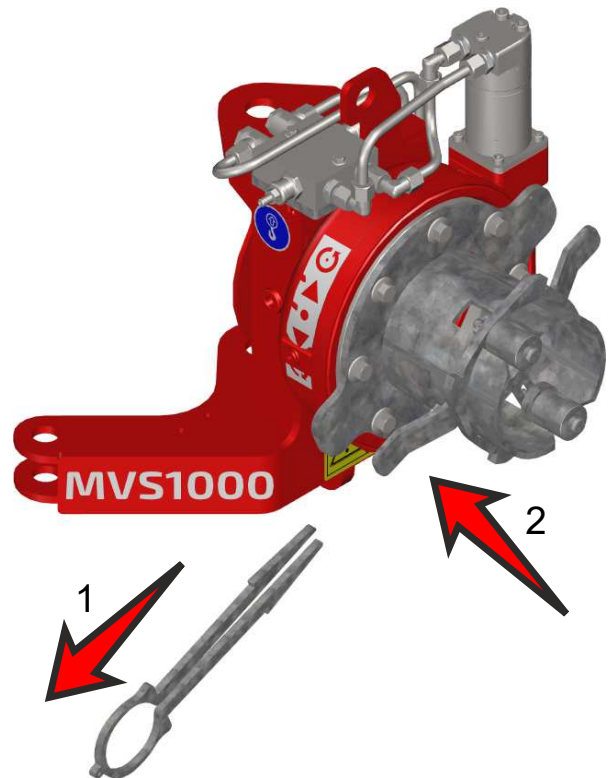
5.6.2 Attaching the vacuum lifter to the rotator

**Caution**

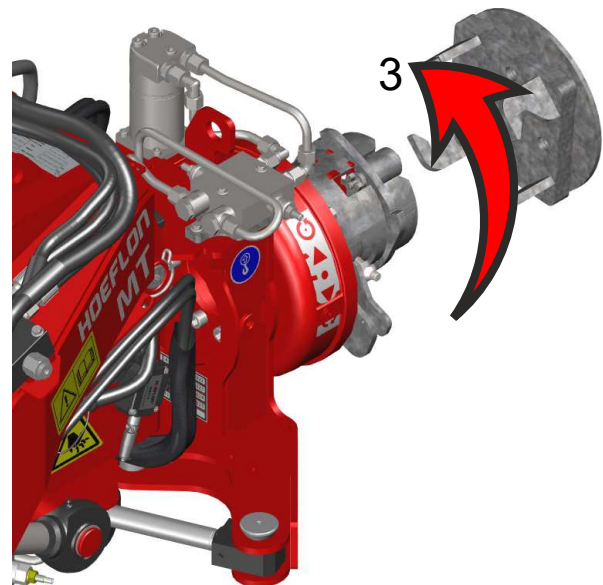
Use the SLOW setting when you install or remove an implement from the crane.

1. Remove the locking key (1).
2. Lower the boom with the vacuum lifter adapter until the male connector is close to its female counterpart.
3. Use the remote control and SLOWLY push the adapter into the glass suction lifter.
4. Push the adapter until the bracket (2) is fully pushed IN.

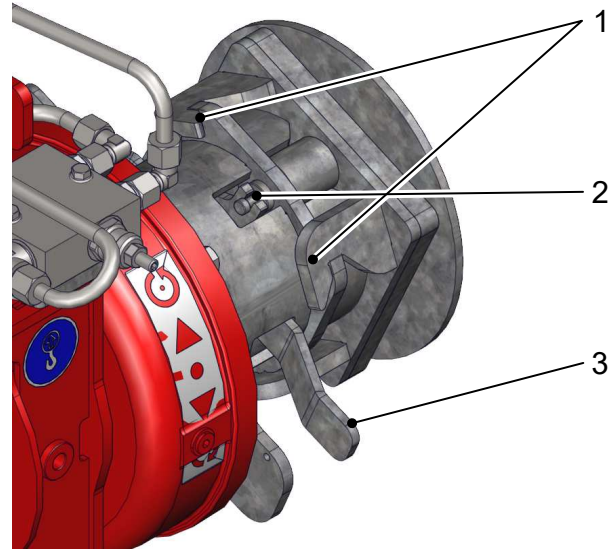
The adapter is unlocked.



5. Use the remote control and SLOWLY rotate the adapter as shown in the picture (3).



6. Fully engage the adapter.
 - The connection collar engages fully in the hooks (1).
 - The locking pin (2) engages fully in the holes in the adapter lifter of the vacuum lifter.
 - The locking lever (3) goes into its forward position.
7. Lock the locking lever with the locking key.

**Note**

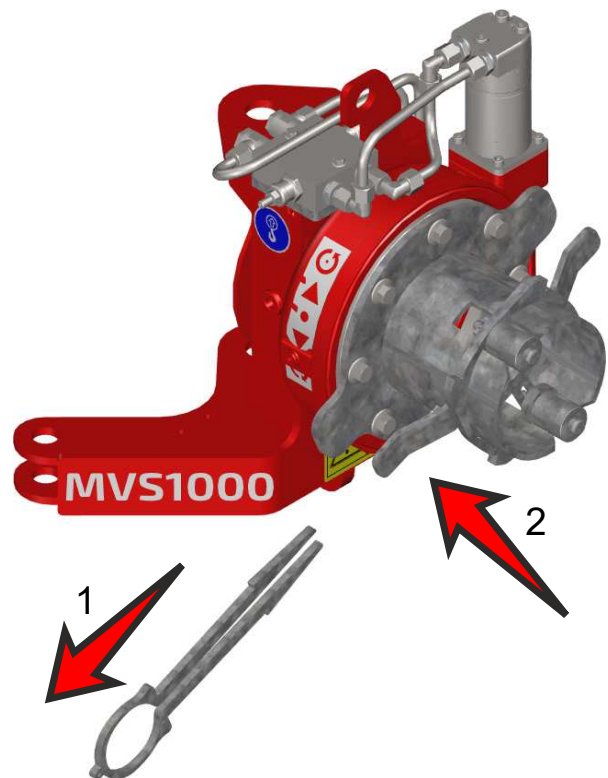
Make sure that the locking lever is fully forward .

5.6.3 Removing the vacuum lifter from the rotator

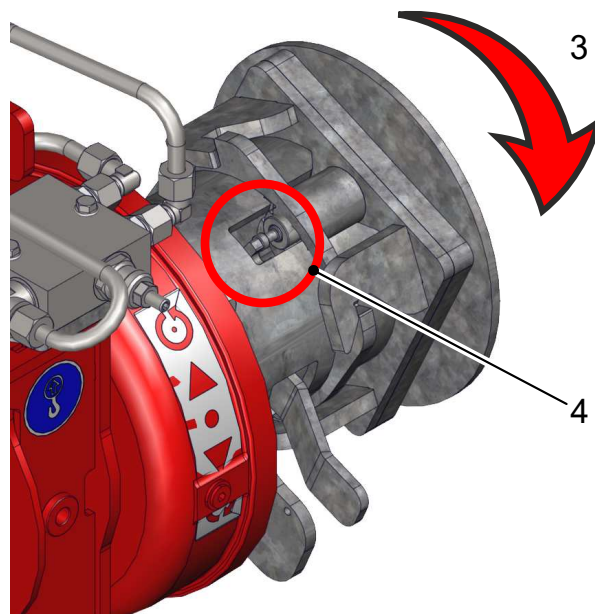
**Caution**

Use the SLOW setting when you install or remove an implement from the crane.

1. Put the vacuum lifter in its storage trolley.
2. Remove the locking key (1).
3. Fully push the locking lever (2) in the direction of the adapter.
 - The adapter is unlocked.
 - Hold the locking lever in this position.



4. Use the remote control and SLOWLY rotate the adapter as shown in the picture (3).
 - You can let go of the locking lever when the locking pin has turned past the hole (4).
5. Continue turning the adapter until it is fully disengaged.
6. Use the remote control and move the adapter back.
7. Put the locking key back in position.



5.7 Removing the adapter for the vacuum lifter



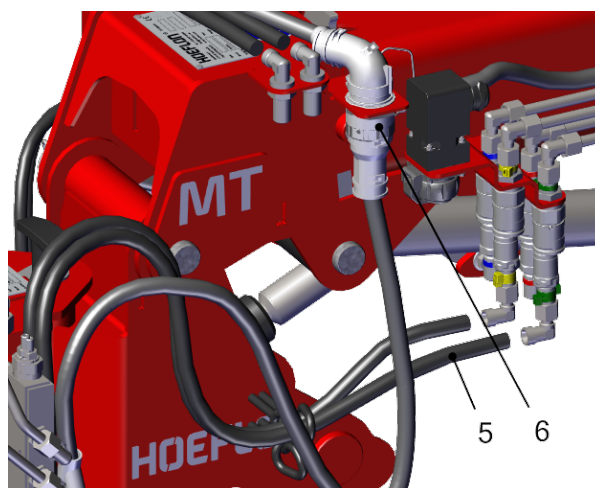
Warning

Make sure that there is no tension on **any** part.

If there is tension on any part, then the parts can suddenly move with much force.

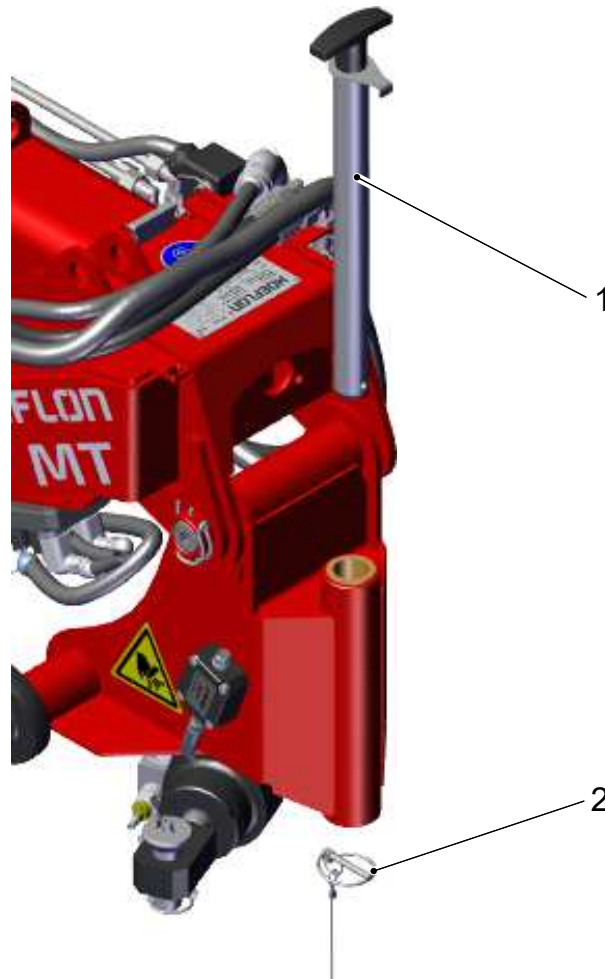
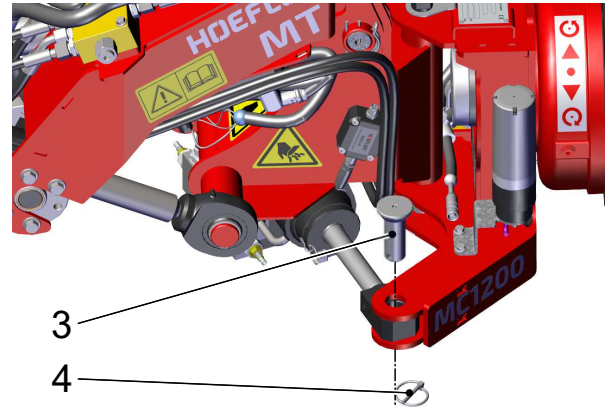
This can lead to loss of limb.

1. Put the adapter for the vacuum lifter in its storage position.
2. Disconnect the hydraulic hoses (5) and the electrical connector (6) from the multitool jib.

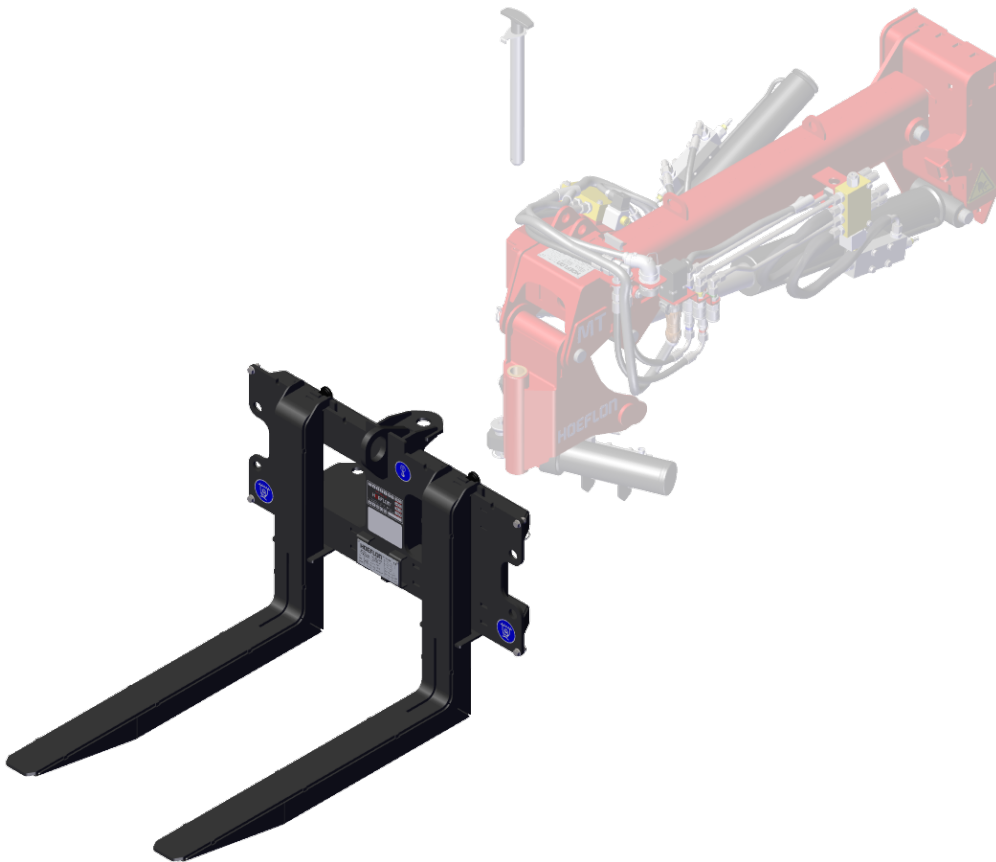


3. Remove the lynch pin (4) from the bottom of the attachment pin for the slewing cylinder
4. Remove the attachment pin (3).
5. Pull the cylinder bush out of the bracket on the adapter.
6. Put the attachment pin back in the cylinder and put the lynch pin in the attachment pin.

7. Remove the lynch pin (2) from the bottom of the locking pin (1) and remove the locking pin.
8. Slowly move the multitool jib up until the adapter is free.
9. Put the locking pin (1) back into the jib and put the lynch pin (2) in the locking pin.



5.8 Attaching the pallet fork

**Caution**

Use the SLOW setting when you install or remove an implement from the crane.

**Warning**

Make sure that all parts move freely during installation.

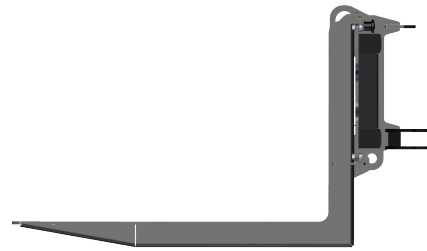
If a part does not move freely tension can occur, the parts can then suddenly move with much force.

This can lead to loss of limb.

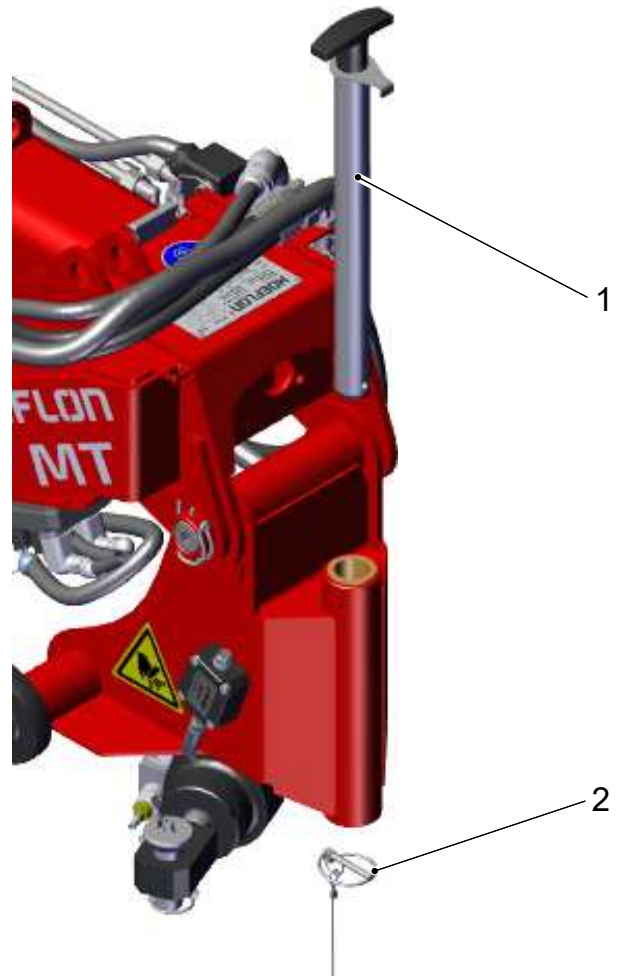
**Note**

Only use a hammer that has a soft face.

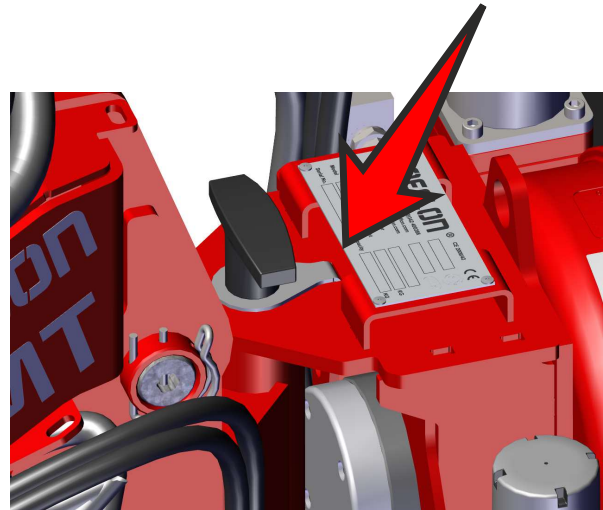
1. Make sure that the pallet fork is positioned correctly.



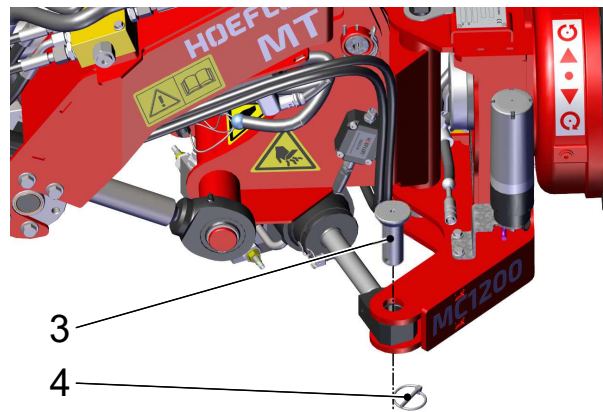
2. Remove the lynch pin (2) from the bottom of the locking pin (1).
3. Remove the locking pin.
4. Slow lower the multitool jib with the boom and move it into the pallet fork.



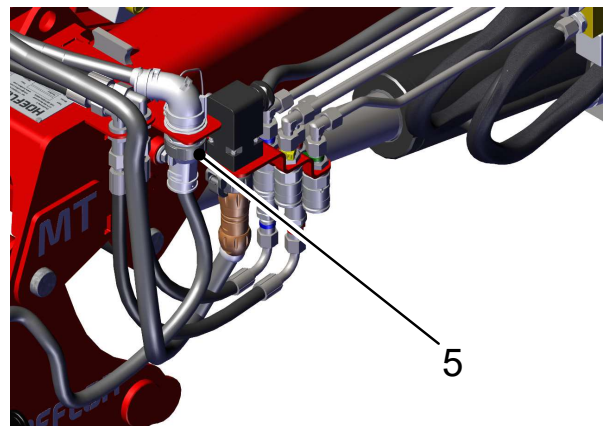
5. Move the locking pin (1) back into the opening to attach the pallet fork to the multitool jib
 - Make sure that the lip on the locking pin goes into its slot in the attachment.
6. Safety the locking pin (1) with the lynch pin (2).



7. Remove the lynch pin (4) from the bottom of the attachment pin (3) for the slewing cylinder and pull out the attachment pin.
8. Attach the cylinder bush of the slewing cylinder with the pin.
9. Safety the attachment pin.



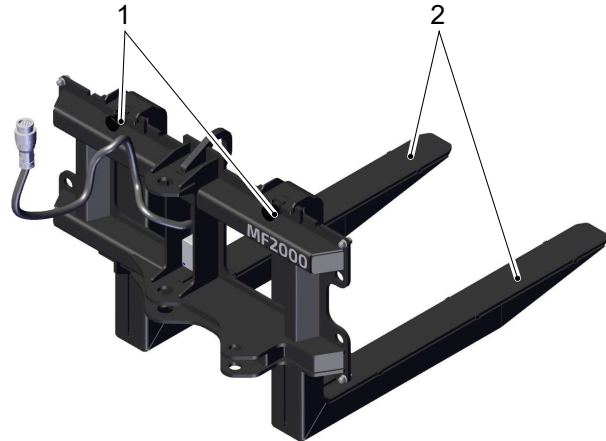
10. Connect the electrical connector (5) to the multitool jib.



5.9 Setting the tines on the pallet fork

The pallet fork has two tines (2). You can change the space between the tines:

1. Pull the adjustment knob (1) back,
2. Move the tine to the correct position.
3. Make sure that the adjustment knob aligns with a slot on the crossbeam.
4. Release the adjustment knob.
 - Make sure that the attachment knob fully engages in its slot.



Caution

Make sure that the distance between each tine and the center of the pallet fork is equal.



Caution

Make sure that the pin of the adjustment knob goes into the slot.

5.10 Removing the pallet fork



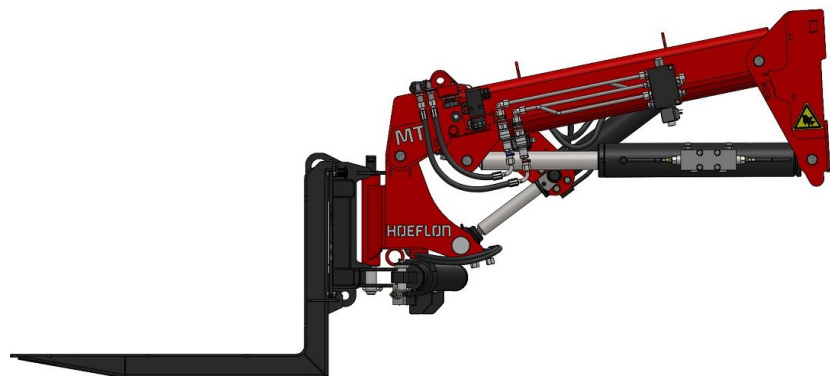
Warning

Make sure that there is no tension on **any** part.

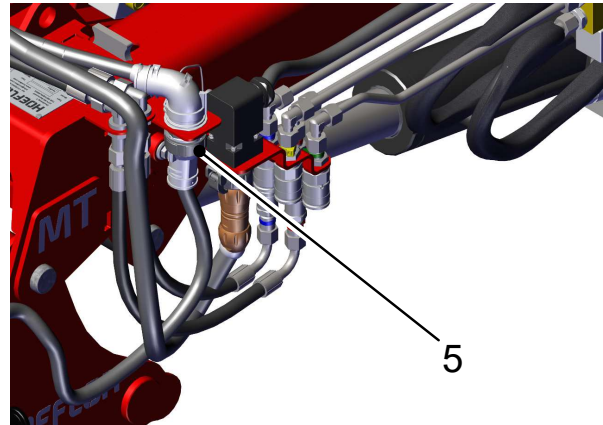
If there is tension on any part, then the parts can suddenly move with much force.

This can lead to loss of limb.

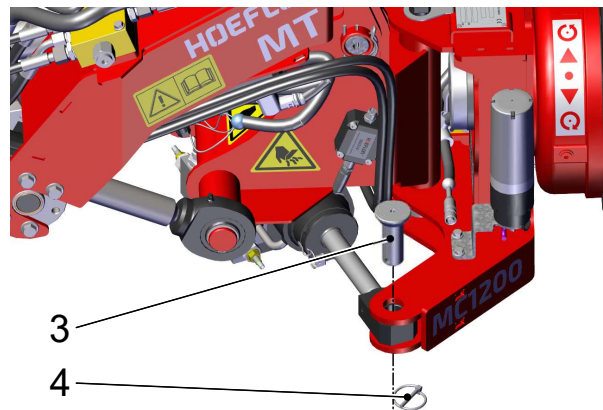
1. Put the pallet fork on the ground in the storage position.



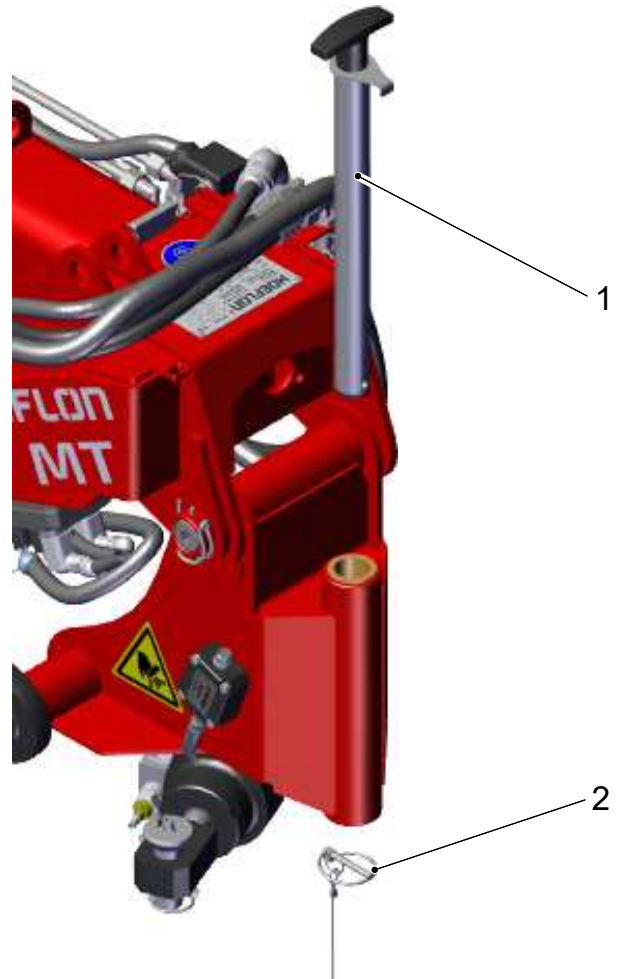
2. Disconnect the electrical connector (5) from the multitool jib.



3. Remove the lynch pin (4) from the bottom of the attachment point for the slewing cylinder
4. Remove the attachment pin (3).
5. Pull the cylinder bush out of the bracket.
6. Put the attachment pin back in the cylinder and put the lynch pin in the attachment pin.



7. Remove the lynch pin (2) from the bottom of the locking pin (1) and remove the locking pin.
8. Slowly move the multitool jib back until the pallet fork is free.
9. Put the locking pin (1) back and put the lynch pin (2) in the locking pin.



5.11 Removing the multitool jib from the boom or an adapter



Warning

Make sure that there is no tension on **any** part.

If there is tension on any part, then the parts can suddenly move with much force.

This can lead to loss of limb.

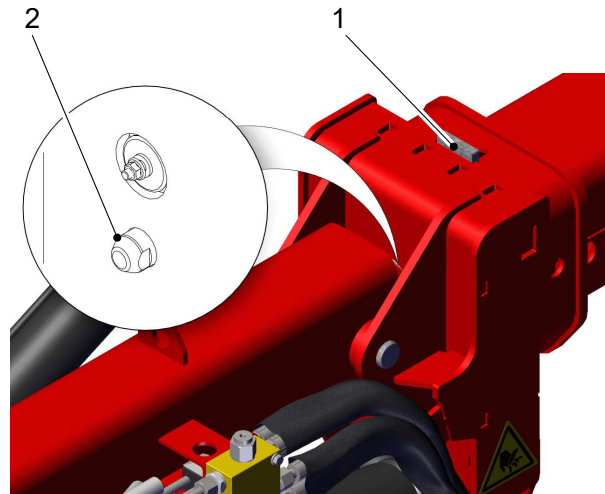
1. Hang the multitool jib from a sling.



Note

Use the two lifting lugs on the top of the multitool jib.

2. Disconnect the electric cable and hydraulic hoses of the multitool jib from the couplings on the boom.
3. Pull the release (1) back and then sideways.
4. Make sure that:
 - the release (1) goes into the slot.
 - The retainer pin (2) moves into the boom.
 - the multitool jib is released.
5. Lower the boom until the multitool jib is free of the boom.
6. Retract the boom.
7. Put the multitool jib in a safe position.



6.

Operation

6.1 Control limitations

You cannot:

- tilt and slew the multitool jib at the same time,
- rotate the multiclaw and move the multiclaw jaws at the same time,
- lift the multitool and move the multiclaw jaws at the same time,
- lift the multitool and rotate the multiclaw at the same time,
- lift the multitool and rotate the vacuum adapter at the same time.



Caution

The automatic leveling of the pallet fork does not work when the boom and / or the jib is raised above 80°.

If you raise the boom and / or the jib above 80° then the pallet fork will tilt rearward.

6.2 Using the multiclaw

Use the multiclaw to lift beams and pipes



Caution

Refer to the load chart in the appendix for the maximum load when you use the multitool.



Caution

Be aware that the maximum load of the multiclaw is also limited by the maximum that the multiclaw can hold by the friction between the jaws.

Use the procedures given in this guide to operate the multitool correctly.

6.2.1 Lifting a beam

There are two approved methods for lifting a beam.

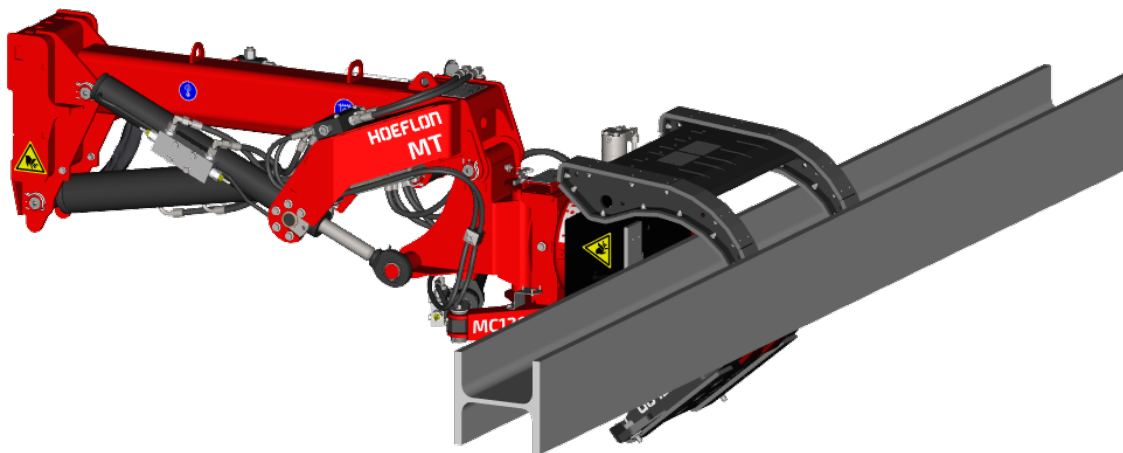
Select the method that you want to use:

- Look at the best procedure to pick up the beam.
- Look at the best procedure to put the beam in position.

If both methods are possible then you must select the method which:

- is safest,
- has the minimum number of movements,
- has the best grip on the beam.

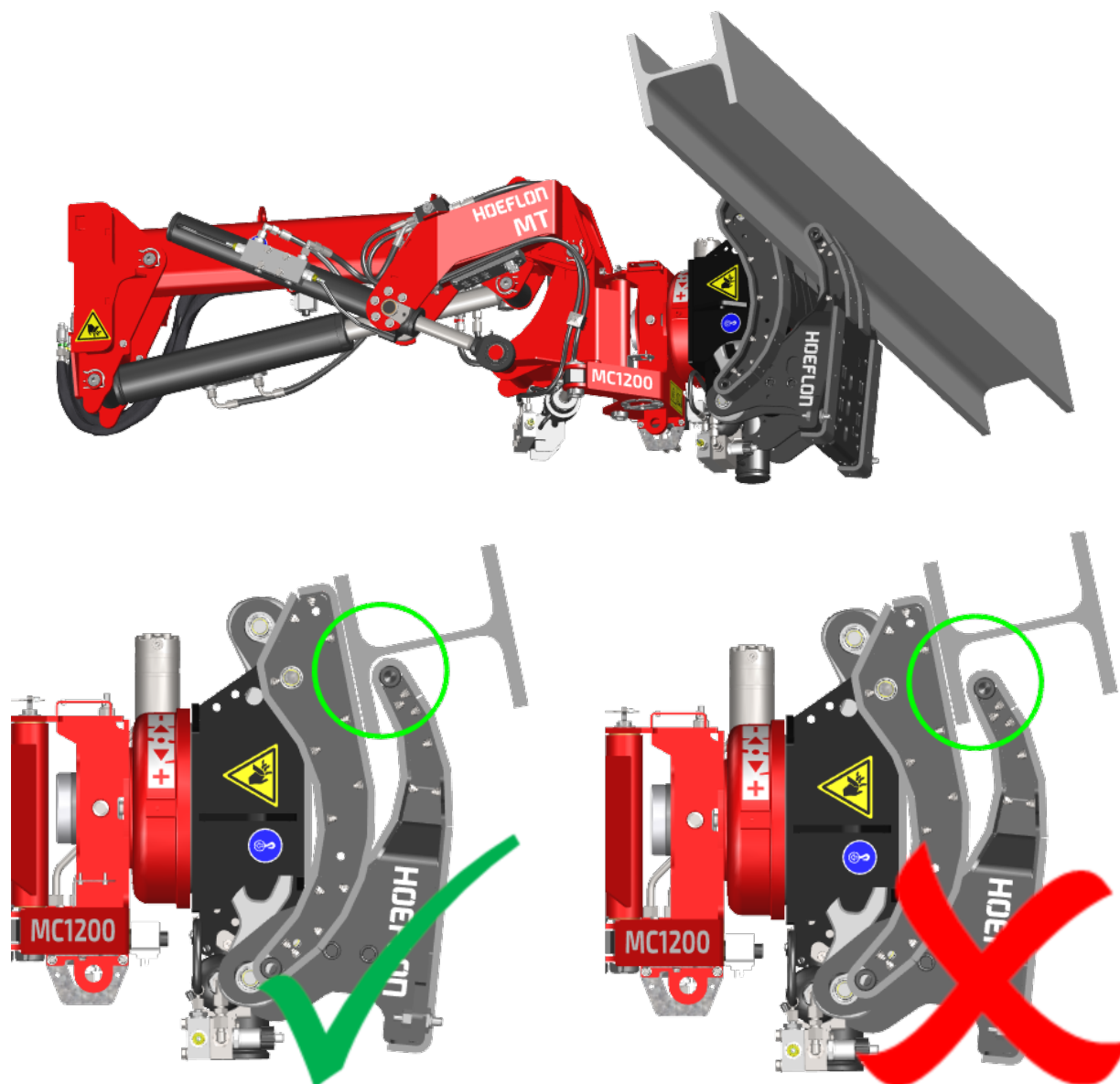
Method 1



Note

Use the clamping plates on the clamping jaws.
Clamping plates distribute the pressure better.

Method 2

**Note**

Do not use the clamping plates on the clamping jaws.

- Make sure that and that the maximum flange length of the beam is gripped - see the green circle in the figure.
- Always try to pick up the beam from the bottom so that the beam pushes into the clamping jaws.

6.2.2 Procedure

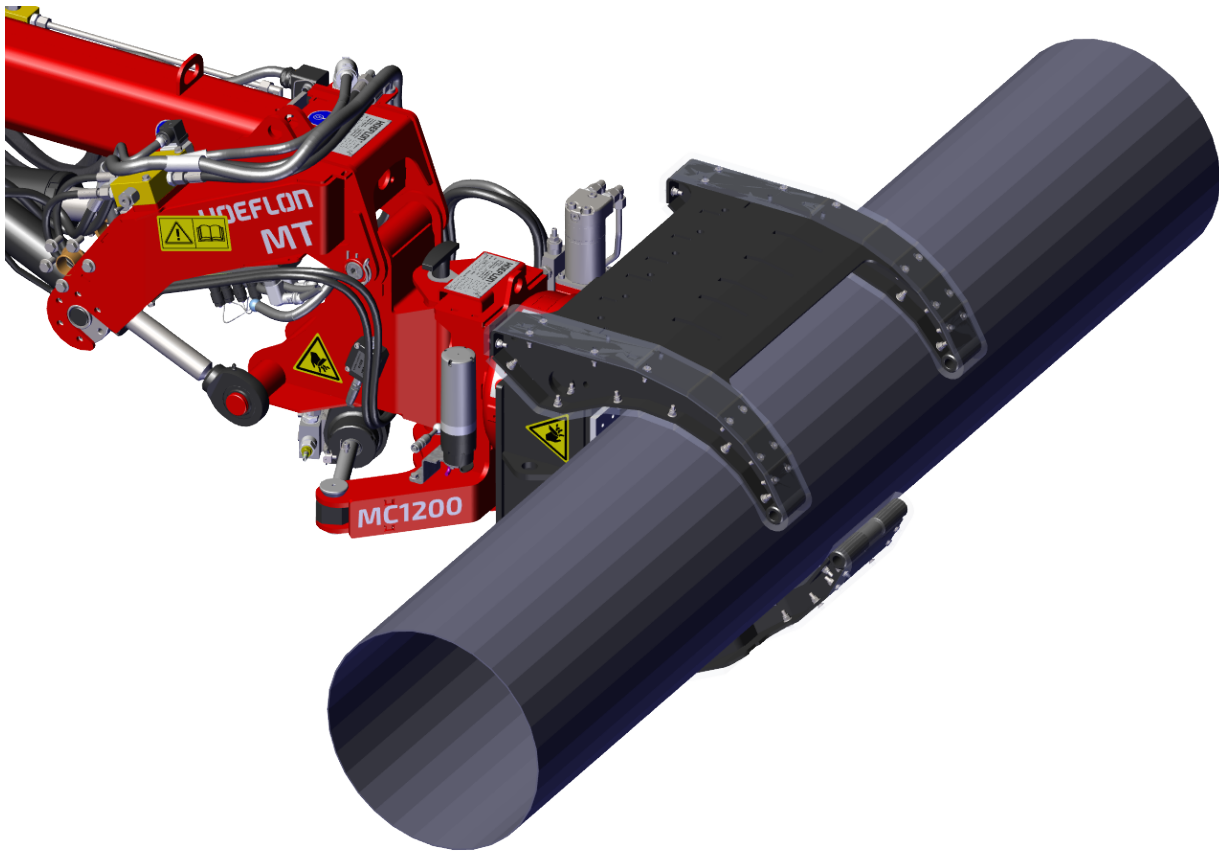


Caution

Refer to the load chart in the appendix for the maximum load when you use the multitool.

1. Attach the multitool jib and the multiclave to the crane.
2. Move the multiclave so that it is close to the center of gravity of the beam.
3. Push the **Lock/unlock function** button once before moving the joystick.
4. Open the clamping jaws of the multiclave.
5. Move the multiclave forwards.
6. Close the clamping jaws of the multiclave with the joystick (forwards).
 - Grip the beam on its center of gravity (in the middle),
 - Use maximum clamping force.
7. Lift the beam carefully.
 - Make sure that it is level,
 - Make sure that it is gripped tightly.
8. Use the levers and joystick on the remote control to move the beam in position.

6.2.3 Lifting pipes



Caution

Refer to the load chart in the appendix for the maximum load when you use the multitool.

1. Attach the multitool jib and the multiclaw to the crane.
2. Move the multiclaw so that it is close to the center of gravity of the pipe.
3. Push the **Lock/unlock function** button once before moving the joystick.
4. Open the clamping jaws of the multiclaw with the joystick (backwards).
5. Move the multiclaw forwards.
6. Close the clamping jaws of the multiclaw with the joystick (forwards).
 - Grip the pipe on its center of gravity (in the middle),
 - Select your clamping grip carefully.
 - You do not want to crush the pipe,
 - You do not want to drop the pipe.
 - You do not want the pipe to move in the multiclamp.

7. Lift the pipe carefully.
 - Make sure that it is level,
 - Make sure that it is gripped sufficiently.
8. Use the levers and joystick on the remote control to move the pipe in position.

6.2.4 Unloading beams and pipes



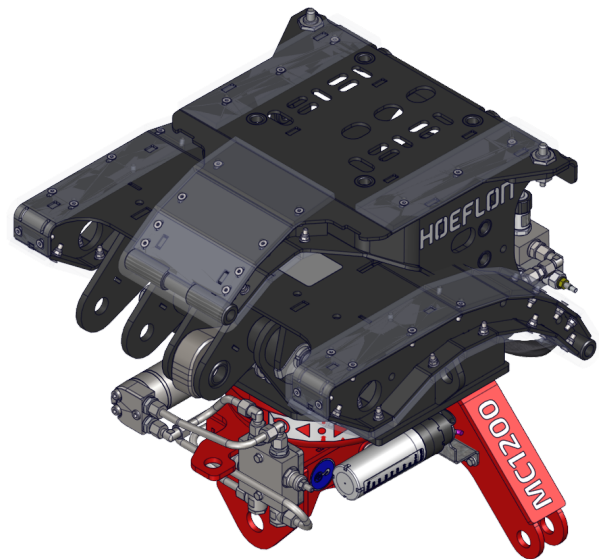
Caution

Make sure that the beam or the pipe is correctly positioned and safe before you stop the clamping function of the multiclaw.

1. Push the **Lock/unlock function** button once before moving the joystick.
2. Open the clamping jaws of the multiclaw.
3. Move the multiclaw away from the beam or the pipe.

6.2.5 Use the multiclaw as a lifting platform

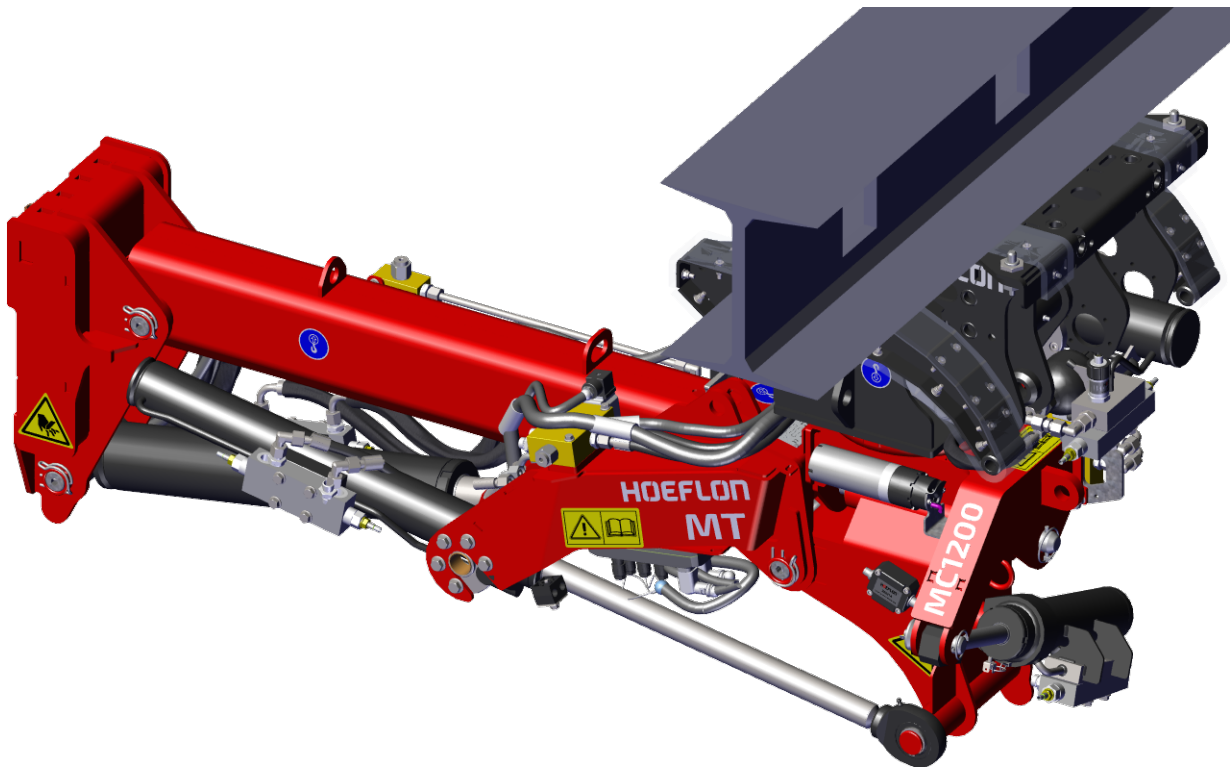
1. Close the clamping jaws and use the single clamping jaw with wide finger as a platform.



Caution

Only use this option if the load cannot be:

- clamped
- lifted, picked up or put in position with the pallet fork.



Lifting the load from below

1. Put the load in a stable position, at least 120 cm above the ground.
2. Push the **Lock/unlock function** button once before moving the joystick.
3. Fully close the multiclaw.
4. Turn the multiclaw so that the lifting table points UP.
5. Move the multiclaw under the load.
 - Make sure that the multiclaw is exactly under the center of gravity of the load.
6. Slowly lift the multiclaw until it touches the load. Do not apply pressure to the load.
7. Lift the load carefully. Make sure that it.
 - is horizontal,
 - is not crushed,
 - does not move on the multiclaw.
8. Use the levers and joystick on the remote control to move the load in position.
9. Attach the load in position.
10. Move the multiclaw away from the load.

Lifting the load from above

Sometimes it is necessary to approach the load from above.

1. Push the **Lock/unlock function** button once before moving the joystick.
2. Fully close the multiclave.
3. Turn the multiclave so that the lifting table points DOWN.
4. Move the multiclave above the load.
 - Make sure that the multiclave is exactly over the center of gravity of the load.
5. Slowly lower the multiclave until it touches the load. Do not apply pressure to the load.
6. Attach the load with lashing straps.
7. Connect the straps through the holes in:
 - the side of the multiclave,
 - the back of the narrow clamping jaw with wide finger.
8. Lift the load carefully. Make sure that it.
 - is horizontal,
 - is not crushed,
 - does not move on the multiclave.

**Caution**

Do not rotate the multiclave.

9. Use the levers and joystick on the remote control to move the load in position.
10. Attach the load in position.
11. Move the multiclave away from the load.

6.3 Lifting glass sheets

**Caution**

Refer to the load chart in the appendix for the maximum load when you use the multitool.

Refer to the user manual of the vacuum lifter for operating instructions.

6.4 Using the pallet fork

**Caution**

The automatic leveling of the pallet fork does not work when the boom and / or the jib is raised above 80°.

If you raise the boom and / or the jib above 80° then the pallet fork will tilt rearward.

**Caution**

The crane can become unbalanced if you slew the pallet too far to a side.
The remote control will give an acoustic warning.
Move the pallet fork back to a safe position.

6.4.1 Lifting and moving a pallet

**Caution**

Refer to the load chart in the appendix for the maximum load when you use the multitool.

**Caution**

Make sure that the load on the pallet cannot move.

Safety the load to the pallet fork.

- The pallet fork has attaching holes for straps.

1. Attach the multitool jib and pallet fork to the crane.
2. Lower the pallet fork with the boom.
3. Make sure that the tines are level.
4. Adjust the width of the tines (see 5.9 Setting the tines on the pallet fork).
5. Slowly move the tines fully under the pallet until the pallet touches the backrest.
6. Carefully lift the pallet
7. Make sure that the pallet:
 - stands on both tines
 - is straight on the tines
 - cannot move.

6.4.2 Put the pallet in position.

**Caution**

Make sure that the tines of the pallet fork stay close to the ground when you move the crane.

1. Use the levers and joystick on the remote control to move the pallet into position.
2. Make sure that it is stable.
3. Slowly move the pallet fork back until the tines are no longer under the pallet and the pallet is fully free.

7.

Maintenance

7.1 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 multitool. Speak to your Hoeflon dealer immediately and schedule a servicing.

Hoeflon International B.V. has maintenance contracts.

7.2 Maintenance work

The risk of accidents with cranes increases during maintenance, cleaning and service. Let your Hoeflon dealer do the maintenance on the 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 Multitool.



7.2.1 First use

Make sure that you do the daily inspection before using the crane for the first time .

7.2.2 Scheduled servicing

1. The first scheduled servicing is after 2 weeks or 50 hours of use.
2. After that do the servicing of the crane every year or every 1000 hours of operation. Whichever comes first.
3. Scheduled servicing and inspections must be done by your Hoeflon dealer or Hoeflon Support B.V. .

7.3 Daily inspection of the multitool

This is in addition to the daily inspection described in the user manual for the compact crane.

Different types of vacuum lifter can be used with the multitool (see 3.5 Vacuum lifter). Instructions for the vacuum lifter are beyond the scope of this user guide. Read the user guide for your vacuum lifter for more information.

1. Clean the multitool.
2. Make sure that:
 - all rotating and moving parts are not worn or damaged,
 - the safety stickers are not missing, worn or damaged,
 - there are no oil leaks,



WARNING

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

Hydraulic oil under pressure can penetrate the skin.

- the hoses and cables are not damaged,
 - Replace them if the inner steel core is visible.
 - the anti-slip material on the multiclave jaws is not damaged or loose,
 - the suction cups of the glass suction lifter are not worn or damaged.
 - the pallet fork is not worn or damaged,
3. Examine the clamping plates each day before you start work.
 - Replace a clamping plate if a connection point is broken.
 - Replace the anti-slip material on the clamping plates if it is damaged down to the metal.
 - The anti-slip material is not part of the warranty of Hoeflon International B.V..
 - Buy new anti-slip material from Hoeflon International B.V.

7.4 Maintenance schedule

The maintenance schedule indicates which maintenance must be done and at what interval.

Different types of vacuum lifter can be used with the multitool (see 3.5 Vacuum lifter). Instructions for the vacuum lifter are beyond the scope of this user guide. Read the user guide for your vacuum lifter for more information.

Description	Action	Hours interval							
		Daily	First 50	50	100	250	500	1000	4000
o = dealer, ● = owner									
the multitool	Clean		●	●					
	General inspection	●							
	Lubricate		●	●					
Safety provisions (emergency stop, sensors, stickers etc.)	Inspect	●							
Oil level in crane hydraulic tank	Inspect / Fill	●							
Oil leaks	Inspect	●							
Hoses and cables	Inspect	●							
Anti-slip material on multiclaw	Inspect	●							
Pallet fork	Inspect	●							
Lifting aids (straps etc.)	Inspect	●							

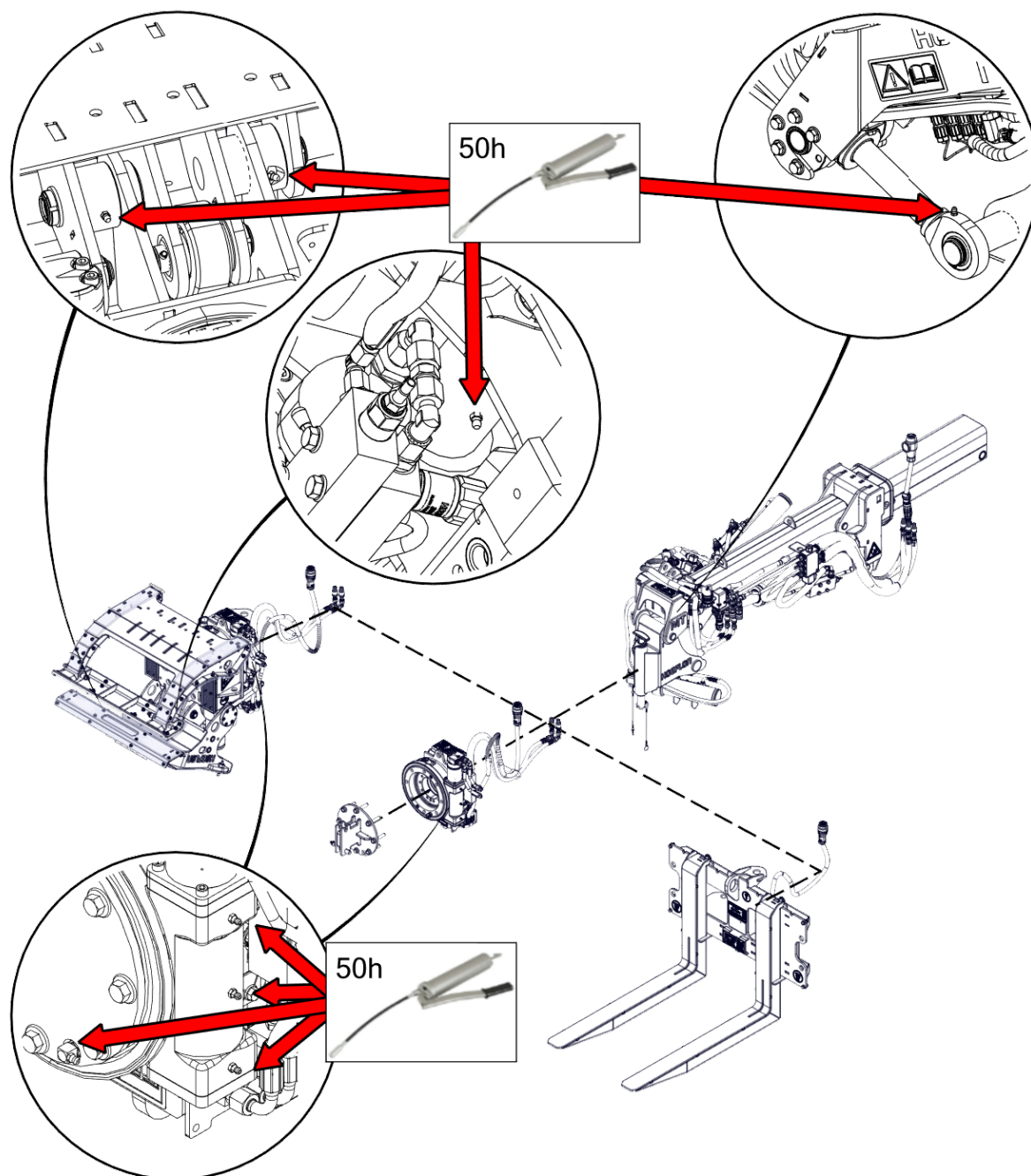
7.5 Lubrication

Different types of vacuum lifter can be used with the multitool (see 3.5 Vacuum lifter). Instructions for the vacuum lifter are beyond the scope of this user guide. Read the user guide for your vacuum lifter for more information.

Lubricate the multitool as shown in the lubrication chart:

- Clean the grease nipples before lubrication.
- Use clean greases, stored in sealed packaging.
- Use only prescribed greases (see 7.5.2 Lubricants).

7.5.1 Lubrication chart



7.5.2 Lubricants

Use one of the following recommended oil types.

Manufacturer	Hydraulic oil
Q8	Heller 46
Total	Equavis ZS 46
Shell	Shell Tellus S2/S3
Kroon oil	Perlus ZF 46

For grease fittings use: EP2

8.

Troubleshooting

8.1 Troubleshooting the multitool

Different types of vacuum lifter can be used with the multitool (see 3.5 Vacuum lifter). Instructions for the vacuum lifter are beyond the scope of this user guide. Read the user guide for your vacuum lifter for more information.

Malfunction	Possible cause	Solution
You cannot attach the multitool jib to the boom.	The release or locking pin is dirty.	Fully clean the boom head.
The remote control is not responding.	An emergency stop button is pushed IN.	1. Make sure that the situation is safe. 2. Unlock the emergency buttons.
The multitool is not recognized by the crane (C30e only).	The RFID tag is broken or missing.	Put the RFID tag back in position. Replace the RFID tag.
The multitool responds differently than expected.	The hydraulic hoses to the multitool are not connected correctly.	Make sure that the hydraulic hoses are connected correctly. Use the color coding on the hydraulic hoses.
Electrical components (e.g. stack light, sensors) do not work.	The electrical cable is not connected correctly.	Make sure that the electrical cable is connected correctly.
Hydraulic malfunction.	Oil level in the crane too low.	Make sure that there is enough hydraulic oil in the hydraulic oil tank of the crane. Fill the tank if necessary.
	Leak in the hydraulic system.	Stop work immediately if you find any hydraulic leaks. Repair a leak immediately.

If your problem is not listed, please speak to your dealer or to Hoeflon Support B.V..

8.2 Error codes

Error code	Possible cause	Solution
174	The jib angle sensor of the multitool has a malfunction	Make sure that the sensor is connected correctly.
175	The tilt angle sensor of the multitool has a malfunction	Make sure that the sensor is connected correctly.
176	The pressure sensor of the multiclaw has a malfunction	Make sure that the sensor is connected correctly.

If the suggested solution does not work, speak to your dealer or to Hoeflon Support B.V..

9.

Transport and storage

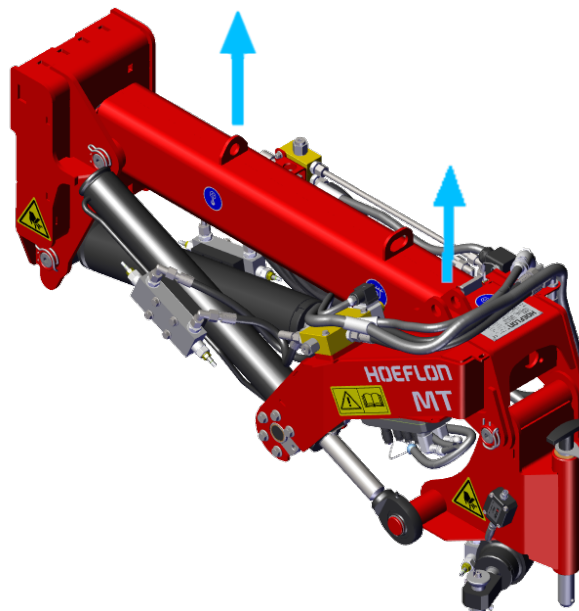
9.1 Lifting the multitool jib



Caution

Make sure that the crane, the hoist and the lifting chains are correctly rated.

1. Remove the multitool jib from the compact crane (see 5.11 Removing the multitool jib from the boom or an adapter).
2. Attach lifting chains to the lifting eyes.
3. Lift the multitool.



Identification of a lifting point.

Point	Load on attachment point
Multitool jib lifting points	Max. 1000 kg per eye

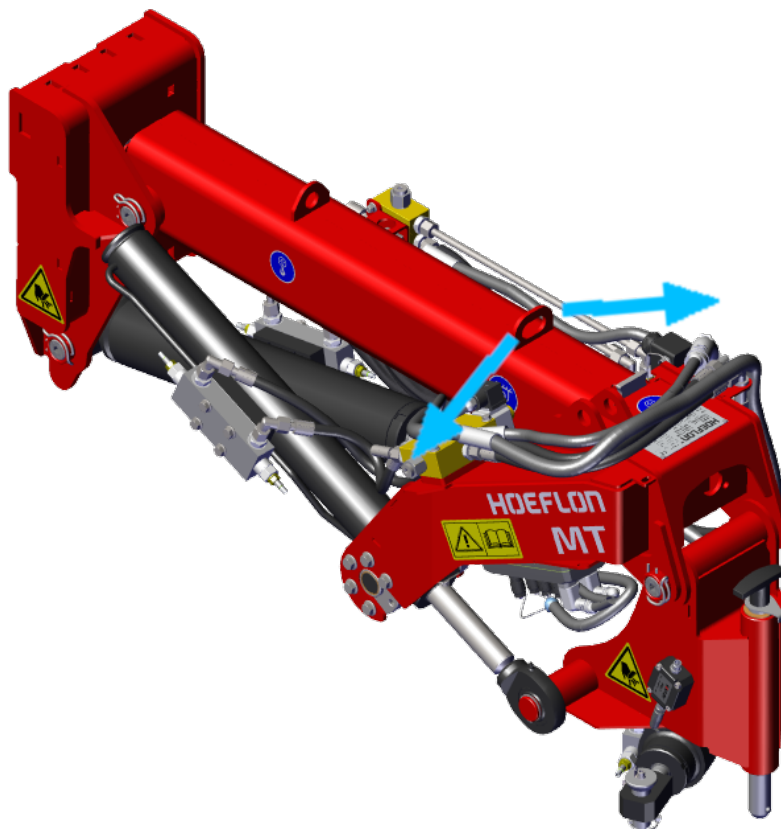
9.2 Attaching the multitool jib for transport



Caution

Make sure that the multitool and the adapters are safely attached to the transport vehicle

1. Put protective material below the multitool jib.
2. Put the multitool jib on the transporting vehicle.
3. Attach lashing straps to the lashing eye of the multitool jib .
4. Make sure that:
 - the straps for the front and side (in the driving direction) are rated for at least half the weight of the multitool jib (see 3.1 Multitool jib).
 - the straps for the rear (in the driving direction) are rated for at least the full weight of the multitool jib.





Identification of a lashing point.

9.3 Putting the multitool in storage

1. Fully clean the multitool.
2. Put the multitool in its storage receptacle.
3. Grease the multitool (see 7.5 Lubrication)
4. Repair all damaged paintwork.
5. Apply a thin layer of grease to the parts that may rust.
6. Keep the multitool in a dry and cool area with good airflow.
7. Make sure that only approved persons are permitted to enter the storage area.

10.

Disposal

10.1 Prepare the Multitool



WARNING

Hydraulic oil under pressure can penetrate the skin.

Before working on or removing hydraulic cylinders:

- Support lifted parts.
- Make sure there is no residual pressure in the cylinder.



Caution

Make sure that you

Only release pressure from the multitool if you are authorized to do so.



Caution

Make sure that all energy sources are disabled and made safe before you start to disassemble the Multitool.

1. Release the pressure from the Multitool.
2. Empty and clean the Multitool.
3. Discard all waste in an environmentally friendly manner.
4. Discard all components in an environmentally friendly manner.

10.2 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,
- greases.

Appendix

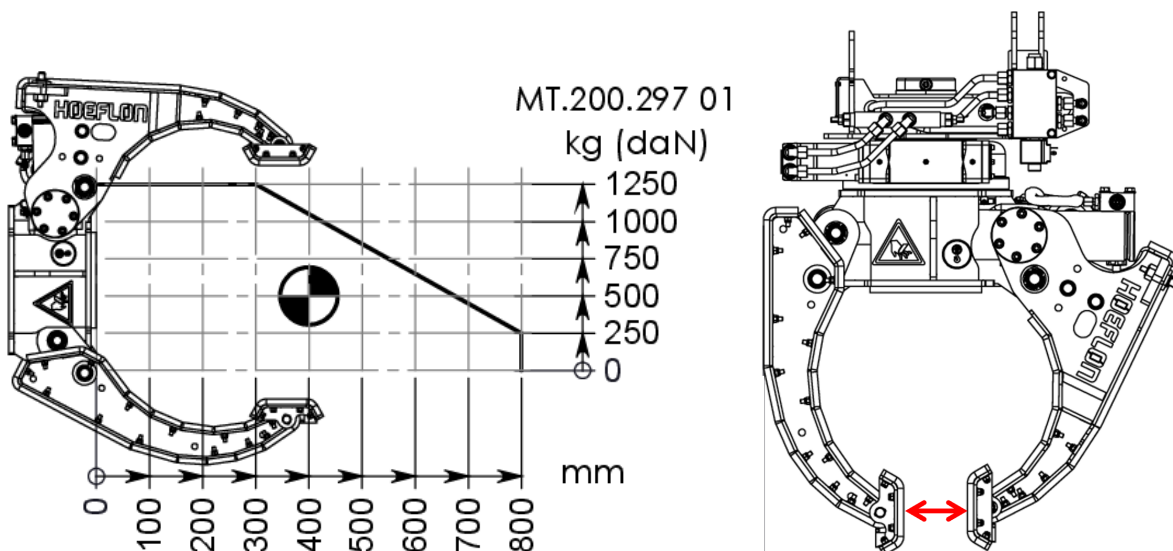
Load chart - Multiclaw

Side view

This load chart shows how much weight that you can lift with the jaws of the multiclaw. This is only if the shape of the object fits into the jaws and cannot move. This capacity does not apply when the multiclaw is rotating, because the load changes during the movement.

The chart line is almost horizontal from the contact surface at the back of the multiclaw to a point almost outside the clamping jaws. This means that for an object between 0 and 30 cm across, the maximum lifting capacity is 1,250 kg.

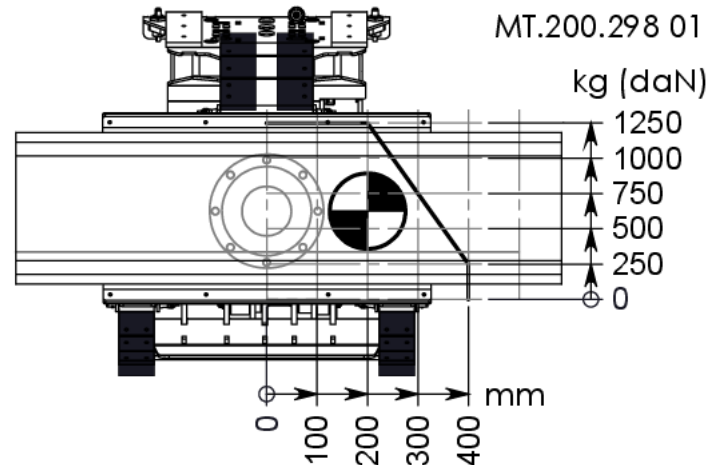
If the diameter of the cross section of the object is more than 30 cm, the permitted weight decreases as shown by the sloping line. If the center of gravity of the load is at 50 cm from the back of the multiclaw you can still lift 750 kg and at 70 cm 500 kg.



Front view

The front view of the multiclaw load chart indicates the lateral mechanical range in the clamping jaws. This only applies if the shape of the object perfectly fits in the jaws and cannot move.

With the center of gravity up to 20 cm from the middle, you can pick up a load of up to 1,250 kg.



Other factors

The shape of the object does not always agree with the shape of the jaws. When it does not, the object that is lifted is held with friction or clamping force. In that case Hoeflon International B.V. cannot guarantee the amount of weight that can be lifted.

Conditions which may decrease lifting capacity are:

- environmental factors (e.g.)
 - wet weather
 - freezing temperatures
- surface properties of the object (e.g. roughness)
- surface condition of the object (e.g. whether it is oily)

Load chart - Pallet fork

This load chart shows the maximum weight that you can lift with the pallet fork. The lifting capacity decreases with the distance of the center of gravity of the load to heel of the fork.

