

OPERATING MANUAL



Mini Floor Crane

MFC

MFC/K
MFC/Ks

3' - 10.00"
(1.17 m)

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Basic Procedures

Please read and comply with:



- The manufacturer's instructions and safety regulations.
- The operating and safety instructions for this crane.
- The inscriptions, labels and warning signs on this crane.
- The safety instructions and operating instructions at the job site.
- The current, local and legal safety regulations.

This crane fulfils the current CE regulations and norms, EN ISO 12100, as well as the machinery directive 2006/42/EG, when used and operated according to the manufacturer's recommendations.

It is the duty and responsibility of each operator to obey all regional rules and regulations concerning the safe usage of this crane.

Please read carefully and follow all of the safety instructions for this appliance before maintenance, repair or operation.

This is in compliance with all the manufacturer's recommendations and all of the legal guidelines as required by the government and local authorities.

In order to allow for a safe and appropriate use of this crane, it may only be used by persons who have been instructed by authorised specialists and who have been granted operative authorisation.

Repairs and maintenance of this crane are only to be undertaken by qualified and trained personnel without exception.

This crane is subject to an annual UVV-inspection by an authorised tester. Without a current UVV-test seal this crane must not be operated.

The owners and anyone hiring/borrowing this crane should have all construction parts undergo a complete inspection. All of the crane's functions must be thoroughly examined and inspected before sale or lease takes place. Damaged and malfunctioning parts must be repaired or replaced.

This operating manual is an essential requirement for all operators of this equipment. For this reason it must always remain in its appropriate place on the crane and always be readily available.

Norbert Wienold GmbH is constantly developing and improving this and other Wienold products. For this reason our appliances and products may be subject to modification without prior notice.

If you have any questions or queries, or if you notice any mistakes and/or deviations concerning the contents of this operating manual, please do not hesitate to contact us.

General Description

MFC Mini Floor Crane

Der **Mini Floor Crane** consists of a chassis with crane construction and extendable Telescope. The height of the Telescope is determined by pumping on the hydraulic cylinder.

The lowering speed of the Telescope is controlled by opening the valve on the Hydraulic cylinder. The further the valve is opened, the faster the Telescope lowers.

The extension of the Telescope is done manually and step by step.

The MFC payload depends on:

- a) Types
- b) Telescope extension / Distance load center to front axle
- d) Weight of attachment

The MFC offers two Models, differed by the outrigger arrangement on the Chassis:

MFC/**K**: Two long outrigger with counterweights.

MFC/**Ks** (Shorty): Without outrigger, with counterweights.

The MFC Installation is done as following:

MFC/**K**: Chassis with **2 long outrigger** aligned rearwarded, and 2 boxes with 14 weights each

MFC/**Ks**: Chassis with 2 boxes, 14 weights each

To accommodate loads, the Mini Floor Crane is equipped with a crane hook as standard.

Positioning of the MFC during operation has to be reduced to minor and manually movements.

The Mini Floor Crane is not designed for continuous operation. Never leave the Mini Floor Crane with the telescope lifted. Never leave the MFC unattended.

Transportation of persons with the MFC is strictly prohibited!

Do not operate the MFC in areas where an explosion hazard exists.



ALWAYS READ AND UNDERSTAND THE OPERATOR MANUAL BEFORE OPERATION!

All components must be checked for the specified payloads before use.

The payload of the MFC is generally depending on the extension of the Telescope.

Always take care for the ratio of PAYLOAD and TELESCOPE EXTENSION by considering the weight of the used attachment.

Always observe the following for safe operation:

1. Load capacity of the MFC taking into account the Telescope extension
2. Payload of the attachment
3. Weight of the attachment

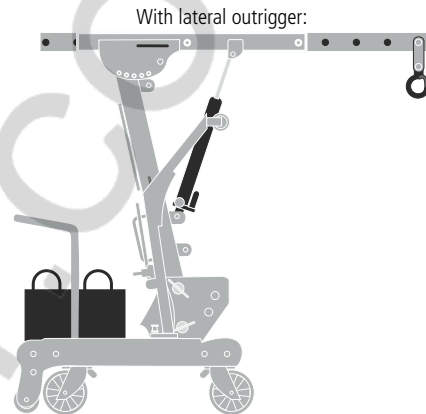
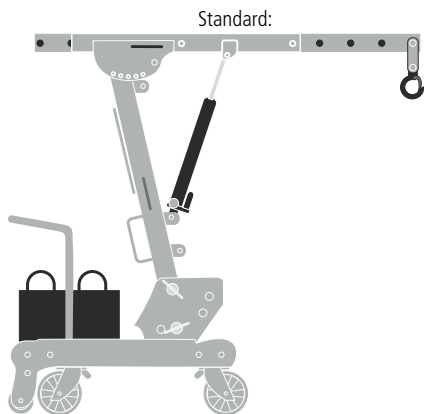
MFC750 Models

Standard: without lateral outrigger

MFC750/Ks

Chassis in short version (Shorty)

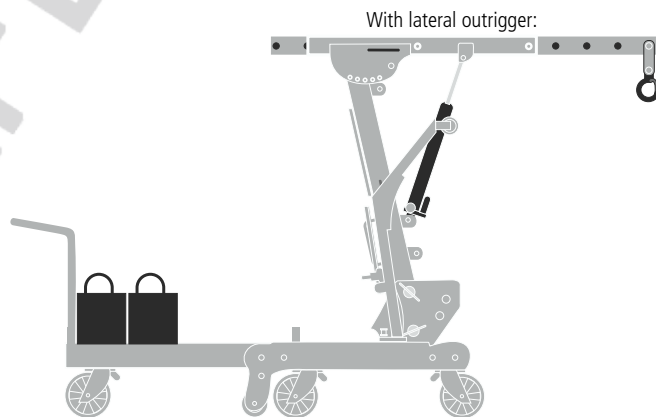
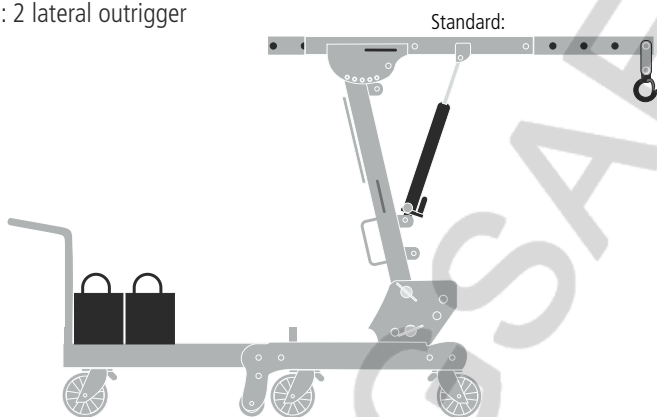
- 2 Weight boxes with 14 weights each
- Option: 2 lateral outrigger



MFC750/K

Chassis as long version with

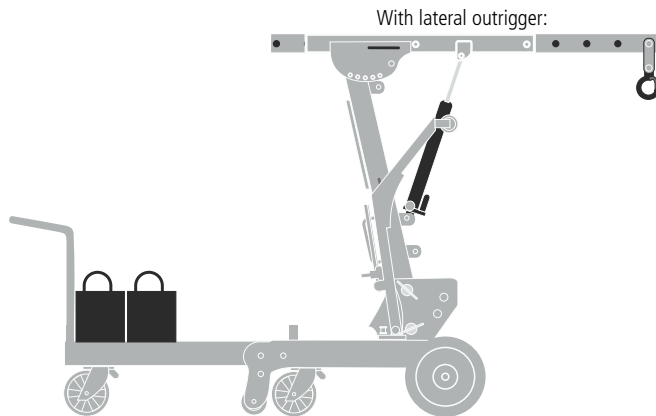
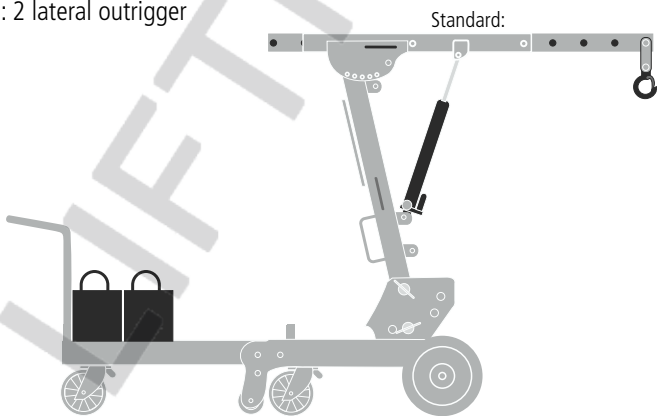
- 2 long outrigger (aligned rearward)
- 2 Weight boxes with 14 weights each
- Option: 2 lateral outrigger



MFC750/K Outdoor

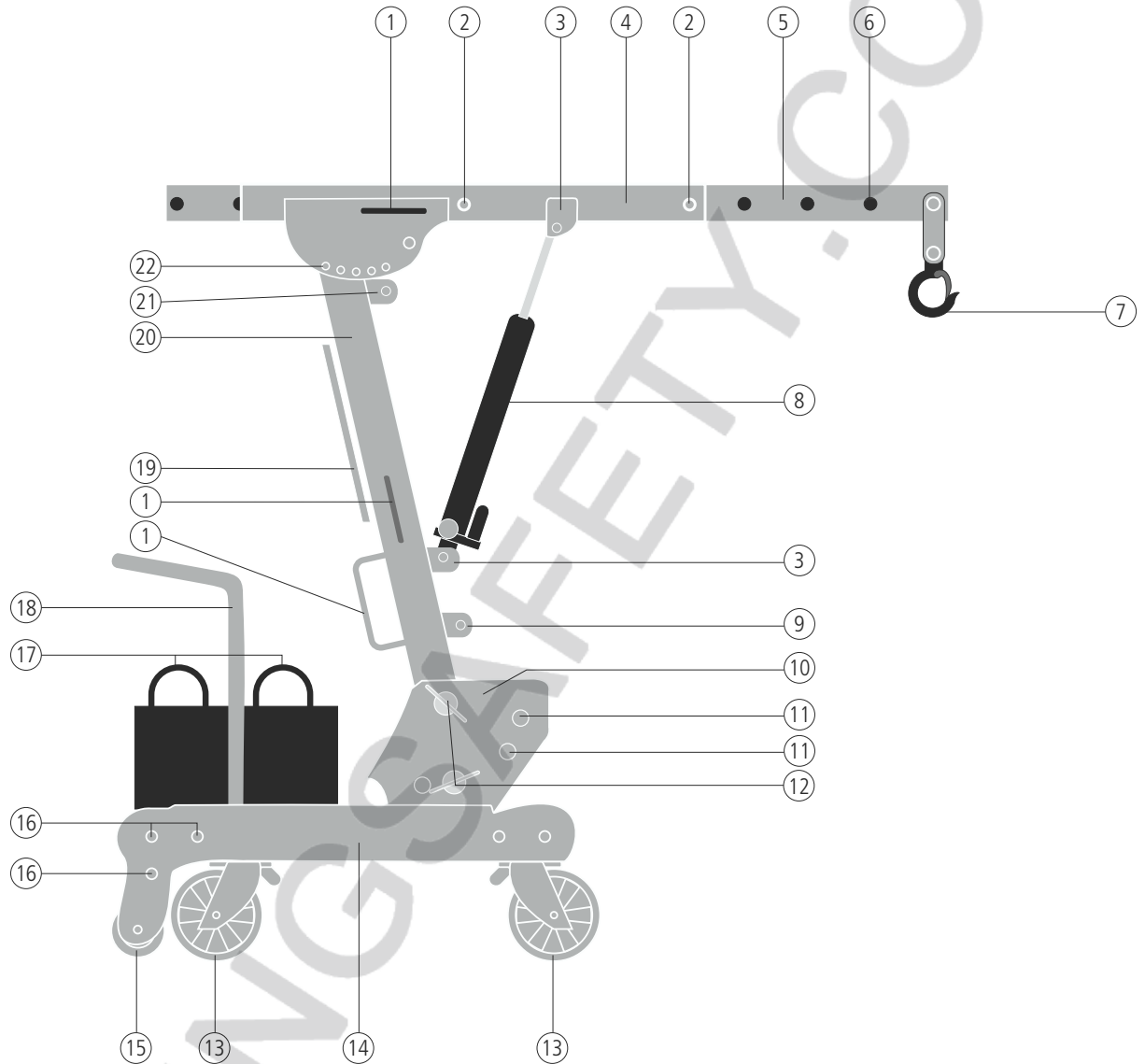
Long version with outdoor wheels

- 2 long outrigger (aligned rearward)
- 2 Weight boxes with 14 weights each
- Option: 2 lateral outrigger



Components MFC750/Ks (Shorty)

Standard: Without Lateral Outrigger



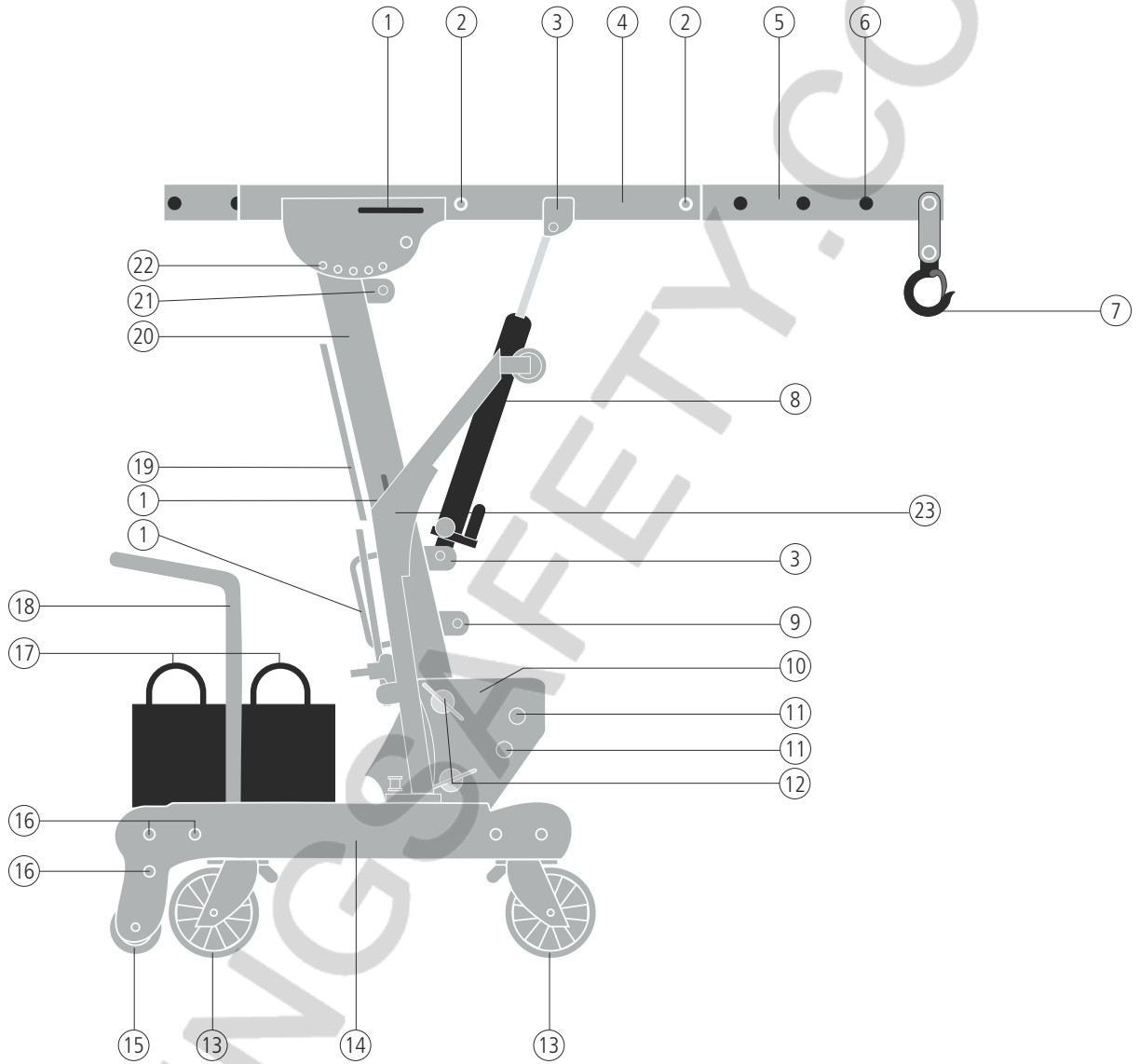
- 1) Carry handle
- 2) Locking screw telescope
- 3) Adapter hydraulic cylinder
- 4) Telescope arm
- 5) Telescope
- 6) Telescope adjustment
- 7) Load hook

- 8) Hydraulic cylinder
- 9) Additional Hydraulic cylinder
- 10) Adapter main arm
- 11) Transport drillings
- 12) Mounting bolts
- 13) Swivel caster
- 14) Chassis
- 15) Support caster

- 16) Fixation / Drillings for long outrigger
- 17) Counterweights and Boxes
- 18) Steering bracket
- 19) Pump lever for hydraulic cylinder
- 20) Main arm
- 21) Fixing hole for transport position
- 22) Locking holes

Components MFC750/Ks (Shorty)

With Optional Lateral Outrigger



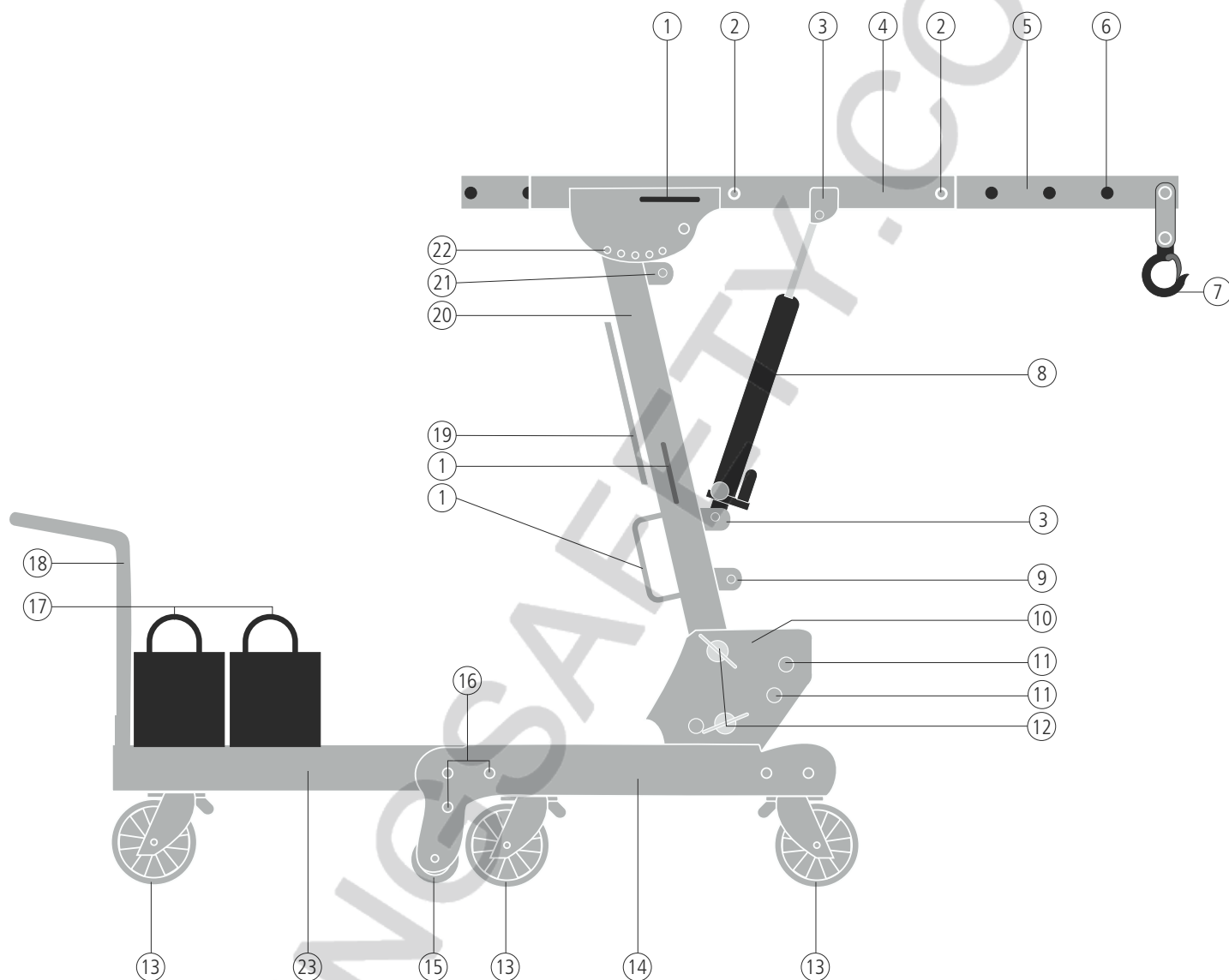
- | | | |
|-------------------------------|----------------------------------|---|
| 1) Carry handle | 8) Hydraulic cylinder | 16) Fixation / Drillings for long outrigger |
| 2) Locking screw telescope | 9) Additional Hydraulic cylinder | 17) Counterweights and Boxes |
| 3) Adapter hydraulic cylinder | 10) Adapter Main arm | 18) Steering bracket |
| 4) Telescope arm | 11) Transport drillings | 19) Pump lever for hydraulic cylinder |
| 5) Telescope | 12) Mounting bolts | 20) Main arm |
| 6) Telescope adjustment | 13) Swivel caster | 21) Fixing hole for transport position |
| 7) Load hook | 14) Chassis | 22) Locking holes |
| | 15) Support caster | |

Additional accessories:

23) Lateral outrigger

Components MFC750/K

Standard: Without Lateral Outrigger



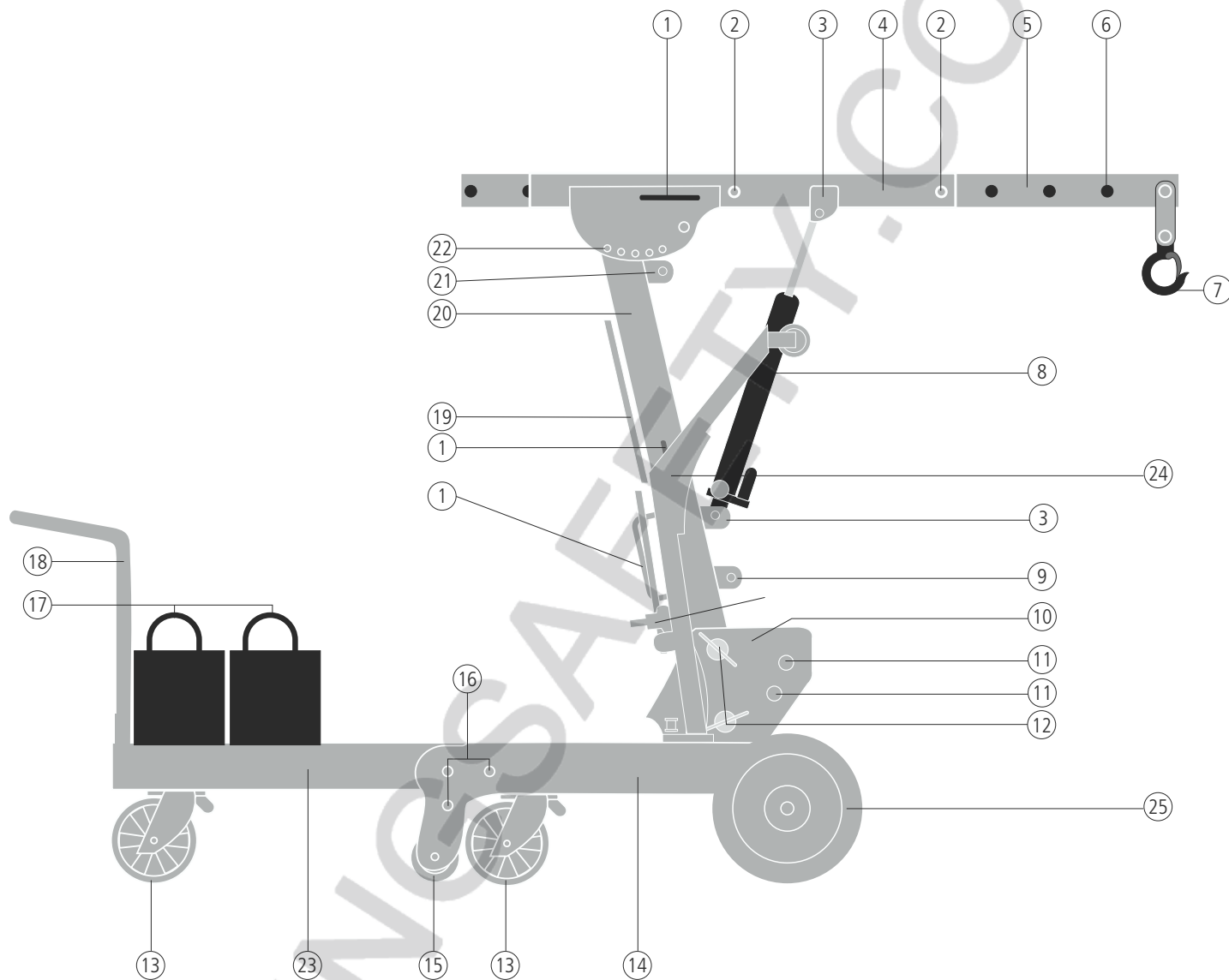
- 1) Carry handle
- 2) Locking screw telescope
- 3) Adapter hydraulic cylinder
- 4) Telescope arm
- 5) Telescope
- 6) Telescope adjustment
- 7) Load hook

- 8) Hydraulic cylinder
- 9) Additional Hydraulic cylinder
- 10) Adapter Main arm
- 11) Transport drillings
- 12) Mounting bolts
- 13) Swivel caster
- 14) Chassis
- 15) Support caster

- 16) Fixation / Drillings for long outrigger
- 17) Counterweights and Boxes
- 18) Steering bracket
- 19) Pump lever for hydraulic cylinder
- 20) Main arm
- 21) Fixing hole for transport position
- 22) Locking holes
- 23) Long outrigger

Components MFC750/K

With Outdoor Wheels And Lateral Outrigger



- 1) Carry handle
- 2) Locking screw telescope
- 3) Adapter hydraulic cylinder
- 4) Telescope arm
- 5) Telescope
- 6) Telescope adjustment
- 7) Load hook

- 8) Hydraulic cylinder
- 9) Additional Hydraulic cylinder
- 10) Adapter Main arm
- 11) Transport drillings
- 12) Mounting bolts
- 13) Swivel caster
- 14) Chassis
- 15) Support caster

- 16) Fixation / Drillings for long outrigger
- 17) Counterweights and Boxes
- 18) Steering bracket
- 19) Pump lever for hydraulic cylinder
- 20) Main arm
- 21) Fixing hole for transport position
- 22) Locking holes
- 23) Long outrigger

Additional accessories:

- 24) Lateral outrigger
- 25) Outdoor wheels

Safety Instructions



Non compliance with the instructions and safety rules in this operating manual may result in serious injury or accidents including death!

Do Not Operate Unless:

- The personnel have been trained on this type of unit and are deemed competent. All operators should read the operating manual carefully.

1. Avoid hazardous situations.

Know and understand the safety regulations before going on to the next section.

2. Always perform a pre-operation inspection on the MFC.
3. Inspect the working area thoroughly before using the MFC.
4. Always perform the function test as per the operating manual prior to use.
5. Only use the MFC as per the operating instructions. Any deviations are not acceptable. In case, you must always contact the owner of the equipment.



Read, understand and obey:

- a) the manufacturer's instructions and safety instructions.
- b) the operating manuals and safety instructions for the MFC.
- c) the inscriptions, labels and warning signs on the MFC.
- d) the safety instructions and work procedures on the job site.
- e) the relevant legislation in force for the equipment in use.

Safety Instructions

Wear Appropriate Personal Protective Equipment (PPE)

Always wear PPE before operating the unit including:

1. Safety helmets
2. Safety goggles
3. Safety shoes

Always check which PPE is required at each particular job site. Do not use the unit and do not execute any function tests without wearing the appropriate PPE.

Keep loose clothes, jewelry, hair etc. away from any moving parts and ensure appropriate PPE is worn whilst operating the unit. Keep hands and feet within the areas acceptable to operate the winch safely to raise or lower the unit.

Fall Hazards

Do not use this lift as a personnel lifting platform or step.
Do not stand on the loading accessories.
Do not climb on the mast, the chassis or other components.

Tip-over hazards

Lift the load only when all outrigger, stabilizers etc. are completely lowered, aligned, locked and securely fixed. Make sure that the casters have solid ground contact. For models with lateral outriggers: Lift the load only, when the outrigger are aligned correctly and the casters have solid ground contact. Only operate the MFC with completely filled weight boxes.

A fixed and secured outrigger must not be re-adjusted as long as the crane is loaded or is in a raised position.



While operating with load, always take care that the MFC is positioned on solid, load-bearing and horizontal ground.

Prior to use, check the working area for steep slopes and drop-offs, holes and debris. Also check for instable, slippery or icy surfaces and other possible sources of danger.

Do not raise the load unless the loading devices are correctly secured to the unit.

Do not use any blocks, stones, planks or any other items to balance the MFC.



Do **not** move the MFC with a raised load except for **very** minor positioning.

Never operate the MFC if it is iced. Never operate the MFC in strong or gusty wind conditions. An increase in the load surface area will decrease stability when operating in windy conditions.

Never leave a load in a raised position when windy conditions may occur.



Always ensure, when raising or lowering secured or overhanging loads, that no obstructions can interfere with the safe operation of the unit.



Safety Instructions

Electrocution Hazards - Danger to Life

The MFC is not electrically insulated and will not provide protection from contact with or proximity to electrical current.



Keep away from the MFC if it contacts electrical power cables. Personnel must not touch or operate the MFC until the power conductors have been switched off.

Maintain safe distances away from electrical power conductors and appliances.

Please take into account the relevant current legal regulations and the following chart:

VOLTAGE	MINIMUM SAFETY DISTANCE
Phase-to-Phase	Meters
0 - 300 V	Avoid Contact
300 V - 50 kV	3,1 m
50 kV - 200 kV	4,6 m
200 kV - 350 kV	6,1 m
350 kV - 500 kV	7,6 m
500 kV - 7550 kV	10,7 m
750 kV - 1000 kV	13,7 m

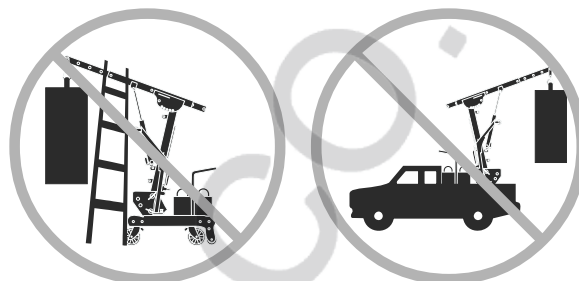
Beware of telescope movement and possible swaying and sagging of electrical cables. Be especially careful in strong or gusty wind conditions!

The unit is not to be used in conjunction with welding units fitted to the chassis, outrigger etc. - under any circumstances.

Injury Hazard

Do not grasp in the telescope arm, the cylinder and do not grasp into adjustment head of Main arm and Telescope arm.

Do not lean any ladders or scaffolding against the crane or the load.



Do not operate the MFC on a movable/mobile surface or on a motor vehicle.

The Safe Working Load (SWL) must not be exceeded under any circumstances. Always refer to the load charts on the unit.

Avoid moving the crane with closed outriggers over debris or uneven ground.

Never replace crane parts that are important for stability or construction with parts with different weights and specifications. Only use original replacement parts. If the equipment is damaged or operating incorrectly you must contact the hirer immediately.

Only use the approved loading accessories with this crane.

Lifting Hazards

Always use the correct lifting techniques when loading or tilting the MFC. Personnel should be trained and competent to use the unit correctly.

Always use the correct lifting techniques when installing and de-installing the loading devices.

Operating the MFC

Ensure that the safety brakes are engaged prior to operating the MFC in order to avoid rolling.

Do not ever stand or allow others to stand under the load or loading devices. Do not stand on the chassis, outrigger or any other components.

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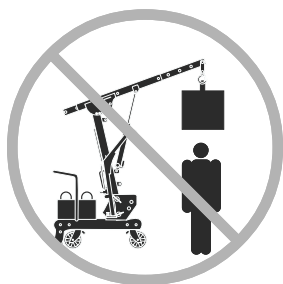
Safety Instructions

Crushing Hazards

Do not raise if the load is not

1. fixed
2. centred
2. secured.

Never stand under the load as it is being raised or lowered or suspended. Do not allow others to stand in the lifting area when the unit is being operated.



Standing under the load is prohibited.

Before lowering the load make sure that nothing is below, e.g. persons, obstacles etc.

While operating the MFC keep hands and fingers away from the cylinder, the folding outriggers and other potential pinch points.

Maintain a firm grasp on the outrigger when the safety bolt is removed. Otherwise the outrigger will fall.

Load hook

Raise loads with a suitable load hook only. Make sure before loading that the load hook is suitable for the load and properly fastened. Raise loads only when the load hook is properly installed and the load is sufficiently secured. When lifting, observe the ratio of lifting height and load center. Never overload the MFC.

Collision Hazards

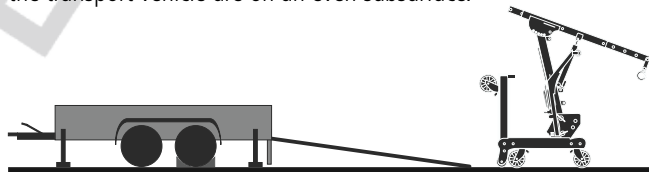
Check the working area for overhead obstructions or other potential sources of danger.



Always be careful when rising or lowering a load on site with the MFC. Avoid to move the unit. Avoid sharp turns, inclines or voids in the ground. Only move the MFC in transport position!

Loading

When loading the MFC, always ensure that the unit and the transport vehicle are on an even subsurface.



Always use the correct lifting techniques. When loading with a crane use the carry handles on the Main arm and the Telescope arm. Do not lift the MFC in working position and with attached load !

Before loading, always remove:

- load,
- weight boxes,
- counterweights,
- steering bracket,
- loading accessories (if used).

Safety Instructions

Damaged Crane Hazards

Do not operate a damaged or malfunctioning lift.

Do not use the MFC with a worn, leaking, oil-lubricated or bent cylinder.

Always conduct a thorough pre-operation inspection prior to each use.

Any damage, faults or failure of the unit must be assessed by a competent person trained to identify such matters and instructed for repair work on this unit.

Non compliance to this rule may lead to serious injury and possible danger to life.

Always ensure that all warning signs are legible and in place.

Always ensure that the operating manual is complete, legible and placed in the storage container installed on the unit.

Only use silicon spray when lubricating MFC components (no oil or grease).

Hazard due to improper use

Never leave a loaded MFC unattended or suspended.

Unauthorised persons may attempt to operate the unit without having been correctly briefed, they could create an unsafe and dangerous situation.

The MFC is not designed for continuous operation. The load could be sinking unintentionally and thereby create dangerous situations.

Legend - Warning Signs

Wienold lifts, appliances & machines use symbols, colour codes and signal words to identify the following:



Safety Alert Symbol:

This is used to alert personnel to potential injury hazards.

Obey all safety messages that follow this symbol to avoid possible injury or death.



RED = DANGER

This is used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.



ORANGE = WARNING

This is used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.



YELLOW = CAUTION

This is used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause property damage or could result in death or serious injury..

Pre-operation Inspection



Non compliance with the instructions and safety rules in this operating manual may result in serious injury or accidents including death!

Do Not Operate Unless:

The personnel have been trained on this type of unit and are deemed competent. All operators should read the operating manual carefully.

1. Avoid hazardous situations.

Know and understand the safety regulations before going on to the next section.

2. Always perform a pre-operation inspection on the MFC.

3. Inspect the working area thoroughly before using the MFC.

4. Always perform the function test as per the operating manual prior to use.

5. Only use the MFC as per the operating instructions. Any deviations are not acceptable. In case, you must always contact the owner of the equipment.

Fundamentals:

The pre-operation inspection is a visual inspection which must always be performed by the operator prior to each work assignment.

This inspection is designed to identify and avoid possible malfunctions of the unit before the operator tests it.

Check the unit for modifications, damages and loose or missing parts.

A malfunctioning or modified unit must not be operated under any circumstances.

If any damage or unauthorised deviation from factory delivered condition is discovered, the unit must be removed from service and appropriately tagged. Additionally, the owner of the equipment must be informed.

Repairs to the unit may only be undertaken by a qualified service technician in compliance with the manufacturer's specifications.

The operator must perform a new pre-operation inspection after any repairs are completed, before going on to the function tests.



Read, understand and obey:

- a) the manufacturer's instructions and safety instructions.
- b) the operating manuals and safety instructions for the MFC.
- c) the inscriptions, labels and warning signs on the MFC.
- d) the safety instructions and work procedures on the job site.
- e) the relevant legislation in force for the equipment in use.

Pre-operation Inspection

Please ensure

that the operating manual is complete, legible and placed in the storage container, installed on the unit.

Please ensure

that all warning signs and labels are both legible and correctly positioned. For further information see

Warning Signs Section.

Check

the following components and areas for damage, modifications and incorrectly installed or missing parts. Make sure that every component of the unit is functional and without any damage e.g.:

- Chassis and base components
- Outrigger, stabilisers, legs
- Wheels and tyres
- Cylinder
- Main arm, Telescope arm and Load hook
- Bolts, pins, screws and nuts
- Other fastening and safety devices

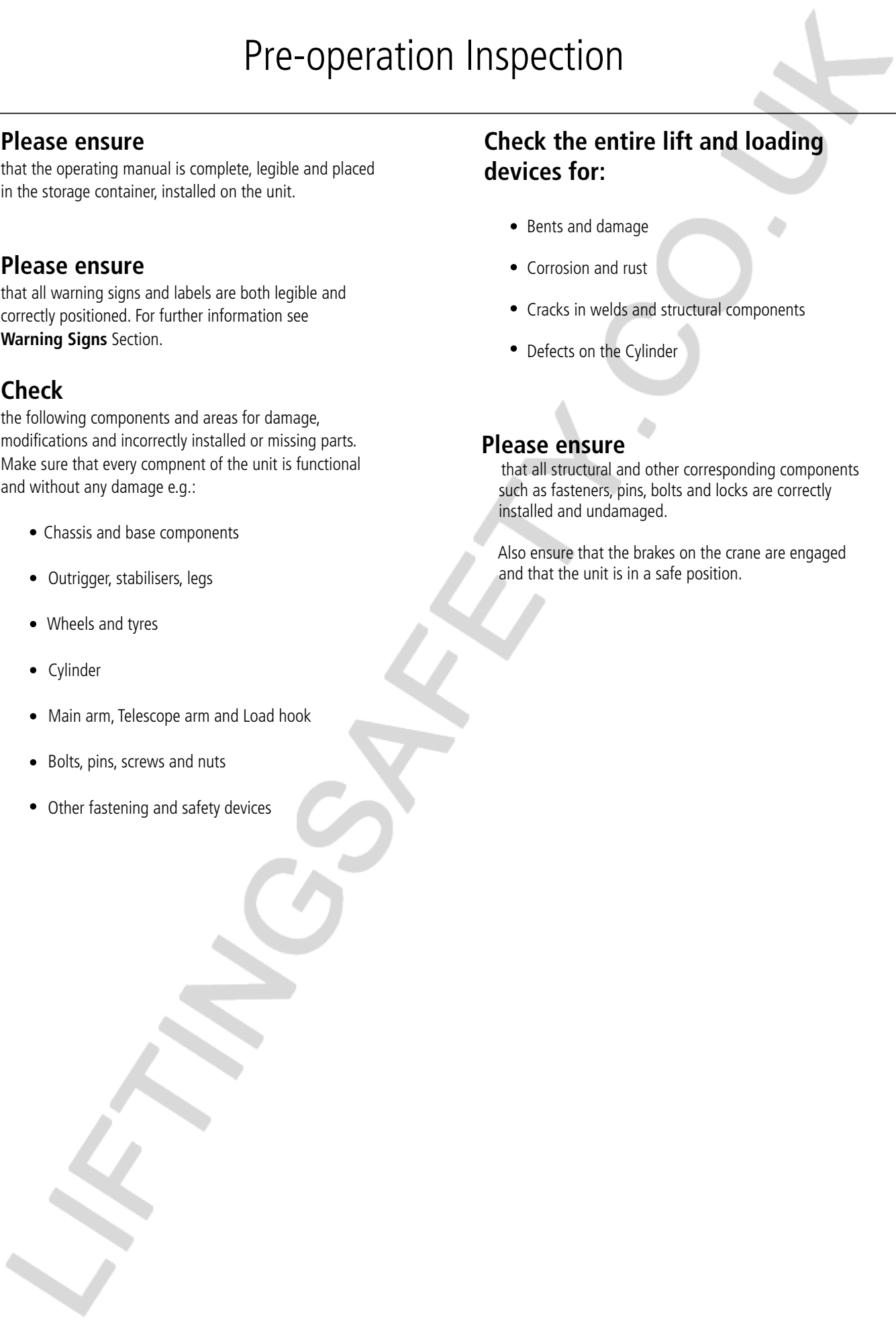
Check the entire lift and loading devices for:

- Bents and damage
- Corrosion and rust
- Cracks in welds and structural components
- Defects on the Cylinder

Please ensure

that all structural and other corresponding components such as fasteners, pins, bolts and locks are correctly installed and undamaged.

Also ensure that the brakes on the crane are engaged and that the unit is in a safe position.



Working Area Inspection



Non compliance with the instructions and safety rules in this operating manual may result in serious injury or accidents including death!

Do Not Operate Unless:

The personnel have been trained on this type of unit and are deemed competent. All operators should read the operating manual carefully.

1. Avoid hazardous situations.

Know and understand the safety regulations before going on to the next section.

2. Always perform a pre-operation inspection on the MFC.

3. Inspect the working area thoroughly before using the MFC.

4. Always perform the function test as per the operating manual prior to use.

5. Only use the MFC as per the operating instructions. Any deviations are not acceptable. In case, you must always contact the owner of the equipment.

Fundamentals

The working area inspection helps the operator to determine if the working area is suitable for safe operation of the unit. The inspection should be performed by the operator prior to moving the unit to the working area.

It is the operator's responsibility to read and know the section on working area hazards and to avoid them while moving, setting up or operating the unit.

Ensure the unit is working on solid ground and the loadings applied by the unit will not cause damage or create additional floor loading.

Avoid sources of danger!

Do not operate the unit if you cannot guarantee a safe operation due to one or more of the following sources of danger:

- Inclines, holes or swells on the work surface or debris.
- Unstable subsurfaces at the working area.
- Insufficient subsurface foundation at the working area.
- Subsurfaces with holes, obstructions etc.
- Overhead obstructions such as:
 - Beams, electric cables and ropes/wires,
 - High voltage cables.
- Unsuitable wind and weather conditions.
- All other possible unsafe surfaces and conditions.

Read, understand and obey:

- a) the manufacturer's instructions and safety instructions.
- b) the operating manuals and safety instructions for the MFC.
- c) the inscriptions, labels and warning signs on the MFC.
- d) the safety instructions and work procedures on the job site.
- e) the relevant legislation in force for the equipment in use.



Function Tests



Non compliance with the instructions and safety rules in this operating manual may result in serious injury or accidents including death!

Do Not Operate Unless:

The personnel have been trained on this type of unit and are deemed competent. All operators should read the operating manual carefully.

1. Avoid hazardous situations.

Know and understand the safety regulations before going on to the next section.

2. Always perform a pre-operation inspection on the MFC.

3. Inspect the working area thoroughly before using the MFC.

4. Always perform the function test as per the operating manual prior to use.

5. Only use the MFC as per the operating instructions. Any deviations are not acceptable. In case, you must always contact the owner of the equipment.

Fundamentals

The function tests are designed to identify malfunctions before the unit goes into service.

The operator must follow the step-by-step instructions and test all functions.

A malfunctioning unit must not be operated under any circumstances.

If any malfunctions are discovered the crane must be removed from service and appropriately tagged. Further use of the unit is prohibited.

Repairs to the unit may only be undertaken by a qualified service technician in compliance with the manufacturer's specifications.

When repair work has been successfully completed the operator must perform another pre-operation inspection and repeat the function tests. Only then may the unit be operated again.



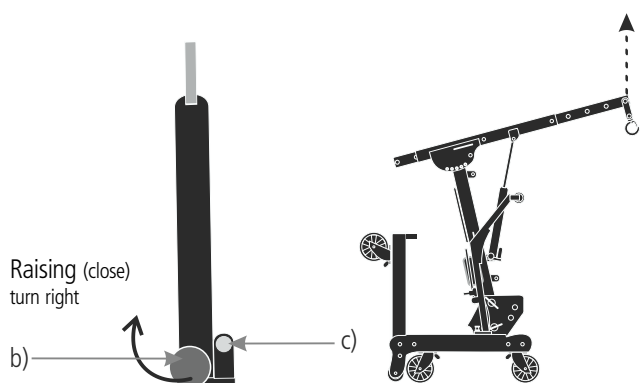
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Function Tests

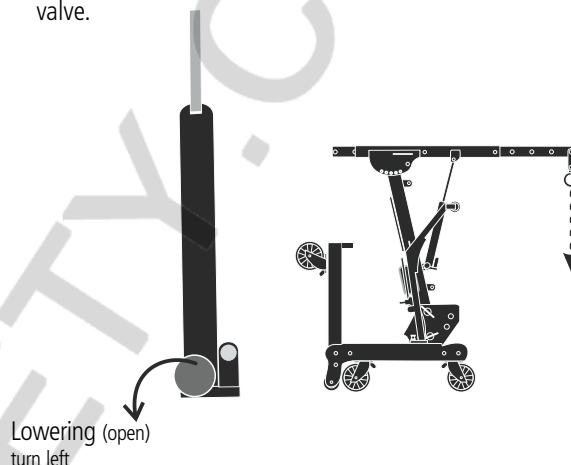
Hydraulic Cylinder

1. Remove the pump lever for the hydraulic cylinder from the bracket on the Main arm a).
2. Close the valve on the hydraulic cylinder by turning the handwheel b) to the right (clockwise) until it stops.



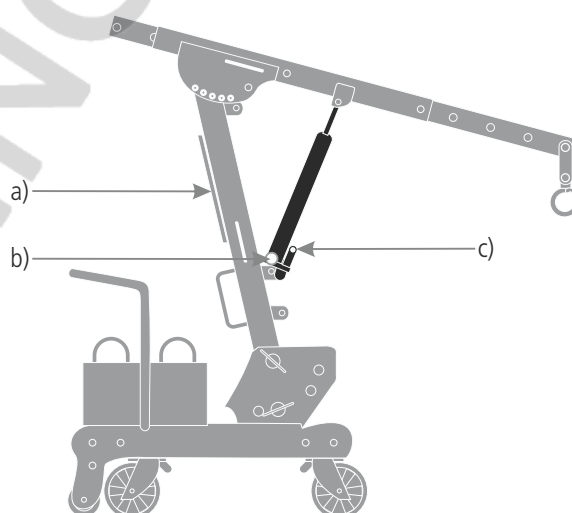
3. Place the pump lever on the right side of the hand-wheel c). Raise up the telescope with a load a few centimeters by up and down movements with the pump lever, and wait aprox. 10-20 minutes.

4. In the unlikely event of a leak in the hydraulic system, the safety locking pin must be installed at any time when the cylinder has not been pumped for a period of 15 minutes.
5. Turn the handwheel c) carefully to the left, to open the valve.



>> The piston of the cylinder (= the telescope arm) should sink easy, jerk-free and regularly.

>> The piston of the cylinder (= the telescope arm) may not come low self-acting when the valve is closed.



Operating Instructions



Do Not Operate Unless:

- The personnel have been trained on this type of unit and are deemed competent. All operators should read the operating manual carefully.

1. Avoid hazardous situations.

Know and understand the safety regulations before going on to the next section.

2. Always perform a pre-operation inspection on the MFC.

3. Inspect the working area thoroughly before using the MFC.

4. Always perform the function test as per the operating manual prior to use.

5. **Only use the MFC as per the operating instructions. Any deviations are not acceptable. In case, you must always contact the owner of the equipment.**

Fundamentals

Using the MFC for anything other than lifting loads is unsafe.

If more than one operator is expected to use the MFC at different times during the same work shift, each individual operator is expected to know and follow all of the safety regulations and instructions in the operating manual.

This means that every new lift operator should know and adhere to the safety regulations and instructions described in the previous chapters before operating the MFC.

Therefore, the following tasks must be undertaken by each operator before initial operation:

Read and understand this operating manual

- Pre-operation inspection
- Function tests
- Working area inspection
- Operating instructions
- Compliance with and application of the information in the load capacity chart

Read, understand and obey:

- a) the manufacturer's instructions and safety instructions.
- b) the operating manuals and safety instructions for the MFC.
- c) the inscriptions, labels and warning signs on the MFC.
- d) the safety instructions and work procedures on the job site.
- e) the relevant legislation in force for the equipment in use.

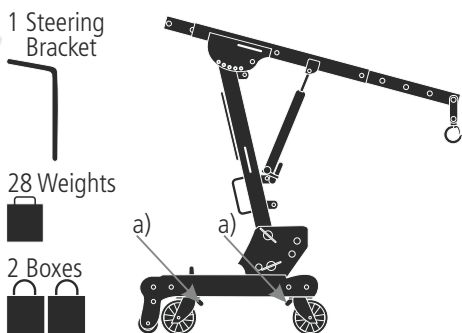


Installation MFC750/Ks

Setup

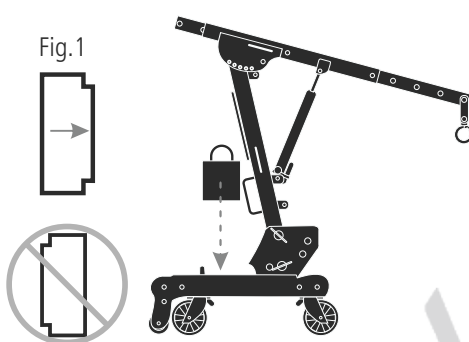
Set up the MFC on firm and level ground only.
Ensure that all safety brakes on the chassis are engaged during set up.

1. Locking the Brakes:



1. Lock the brakes a) on each swivel caster of the chassis, before installation.
2. Press the brake lever with your foot until it is locked up and holding its position self-acting.
3. Repeat Steps 1 and 2 until all Brakes are locked. Check then the braking effect!

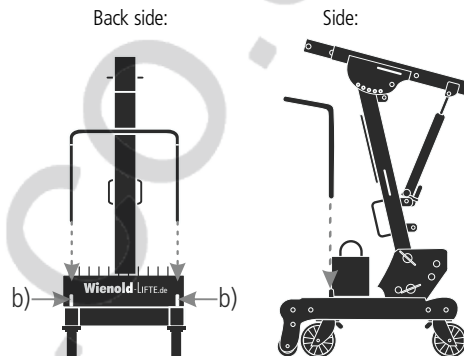
2. Installation of the first Box:



4. Place the first weight box in the **Front bracket** of the chassis. Make sure that the bulge of the box is showing to the Main arm (Fig. 1)!

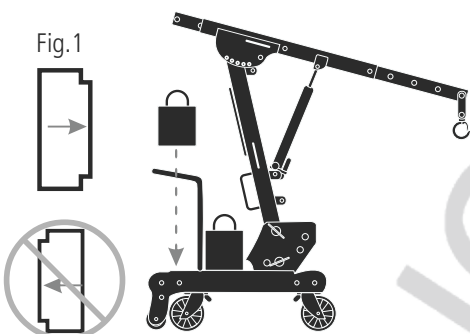
Hinweis:
Place the 2nd Box later. Otherwise you can not install the Steering bracket!

3. Mounting the Steering Bracket:



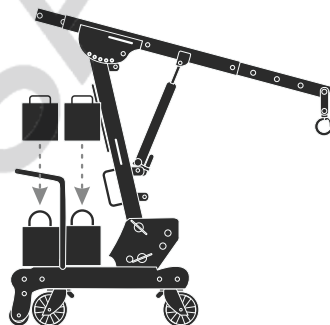
5. Place the Steering bracket on the holders on the right and left of the chassis b).
6. Secure the Steering bracket on both sides with the clamping pin. Push the clamping pin through the opened steering bracket holder. Close the clamping pin to secure.

4. Installation of the first Box:



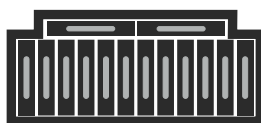
7. Insert the second weight box into the **Rear bracket** of the chassis. Make sure that the bulge of the box is showing to the Main arm (Fig. 1)!
8. Make sure both boxes are firmly placed and anchored before you fill up with the Weights.

5. Fill up the Boxes:



9. Fill up each box with 14 weights in the correct orientation:

12 Weights along
2 Weights crosswise (in bulge)



! ATTENTION:

1. Never operate the crane without fully loaded weight boxes.
2. Do not move the crane with load, only minimal positioning adjustments.

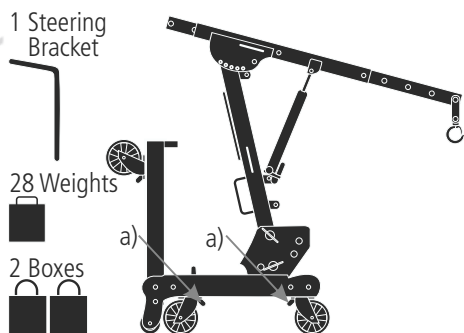
Installation MFC750/K

Outrigger Set Up

Set up the MFC on firm and level ground only.

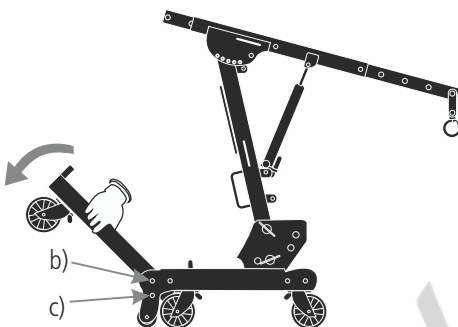
Ensure that all safety brakes on the chassis are engaged during set up.

1. Locking the Brakes:



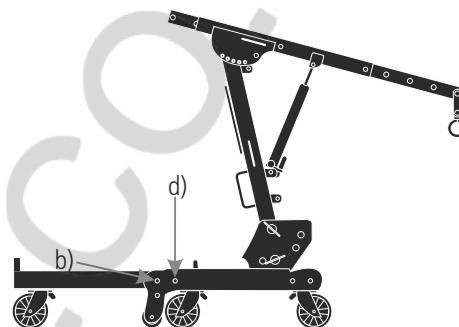
1. Lock the Brakes a) on each caster of the chassis, before installation.
2. Press the brake lever with your foot until it is locked up and holding its position.
3. Repeat Steps 1 and 2 until all Brakes are locked.
4. Check the braking effect!

2. Lowering the Outrigger:



4. Release the bolt c). Hold the Outrigger firmly and pull the pin completely out.
5. Lower the Outrigger carefully until the casters have full ground contact. The screw b) serves as a tilting axis and is building the connection between Outrigger and Chassis.
6. Repeat the process for Outrigger on the opposite side.

3. Securing the Outrigger:



7. Insert the bolt c) into the hole d) and secure.
8. Repeat the process for outrigger on the opposite side.
9. Make sure that both Outriggers are properly secured with the Chassis by bolt and screw. Folding up the Outrigger must now be impossible.



ATTENTION:

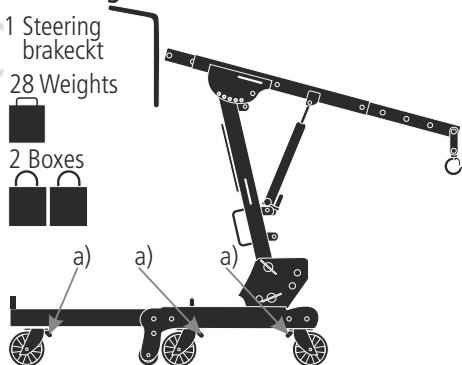
1. Never operate the crane without fully loaded weight boxes.
2. Never operate the crane with only one outrigger.
3. Do not move the crane with load, only minimal positioning adjustments.

Installation MFC750/K

Setup

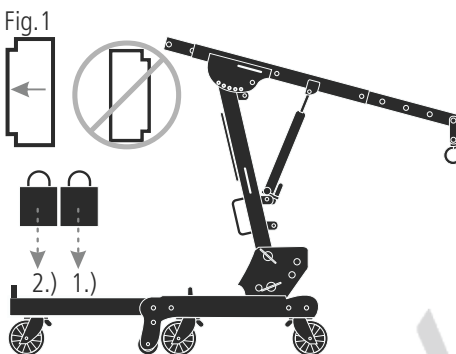
Set up the MFC on firm and level ground only.
Ensure that all safety brakes on the chassis are engaged during set up.

1. Locking the Brakes:



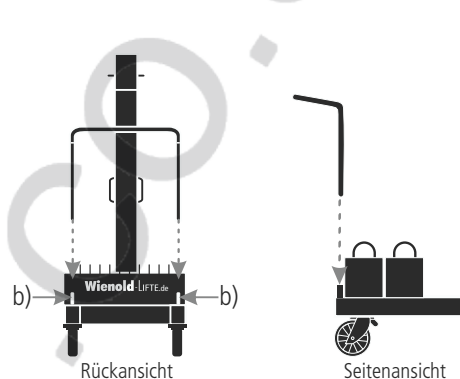
1. Lock the Brakes a) on each swivel caster of the chassis, bevor installation
2. Press the brake lever with your foot until it is locked up and holding ist Position self-acting.
3. Repeat Steps 1 and 2 until all Brakes are locked. Check then the braking effect!

2. Installation of the Boxes:



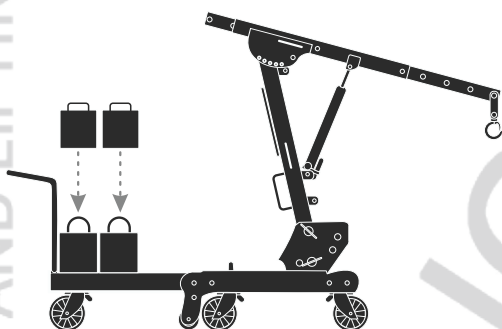
4. Place the first weight box in the **Front bracket** of the chassis. Make sure that the bulge of the box points to the OPPOSITE of the Main arm (Fig.1)!
5. Place the sekond weight box in the **Back bracket** of the chassis. Make sure that the bulge of the box points to the OPPOSITE of the Main arm (Fig.1)!

3. Mounting the Steering Bracket:



6. Place the Steering bracket on the holders on the right and the left of the chassis b).
7. Secure the Steering bracket on both Sides with the clamping pin. Push the clamping pin through the opened steering bracket holder. Close the clamping pin to secure.

4. Fill up the Boxes:



8. Fill up each box with 14 weights in the correct orientation:

12 Weights along
2 Weights crosswise (in bulge)



! ATTENTION:

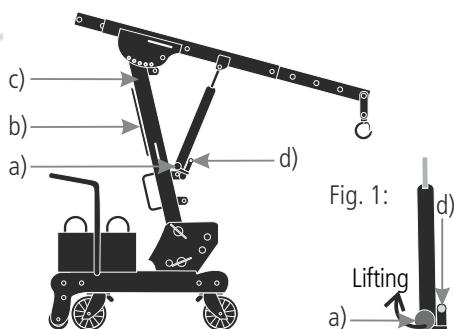
1. Never operate the crane without fully loaded weight boxes.
2. Never operate the crane with only one outrigger.
3. Do not move the crane with load, only minimal positioning adjustments.

Operating MFC750 All Types

Using Pump Lever. Adjusting Telescope Extension.

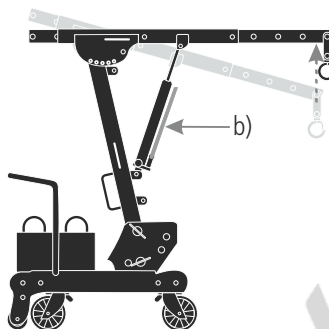
Set up the MFC on firm and level ground only.
Ensure that all safety brakes on the chassis are engaged during set up.

1. Using Pump Lever:



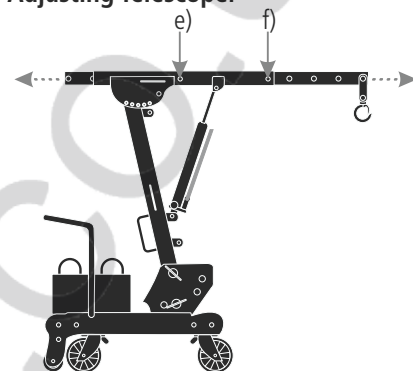
1. Close the valve on the hydraulic cylinder by turning the handwheel to the right (clockwise) until it stops. (Fig. 1).
2. Remove the pump lever b) for the hydraulic cylinder from the bracket on the Main arm c).
3. Place the pump lever on the right side of the hand wheel d).

2. Raising Telescope:



4. Raise the telescope by up and down movements with the pump lever until the Telescope is leveled horizontal.

3. Adjusting Telescope:



5. Unlock the two locking screws e) and f) on the Telescope arm and pull it out.
6. Slide out the telescope carefully into the needed position until the screws can be removed again.
7. Secure the Telescope by tighten firmly the two locking screws.

ATTENTION:

Never pull out the Telescope until the fixation by the two locking screws is impossible!

Note:

The further the telescope is extended, the more reduction of the load capacity is resulted.

ATTENTION:

1. Never operate the crane without fully loaded weight boxes!
2. Never operate the crane with only one outrigger!
3. Do not move the crane with load and do not leave the crane unattended.

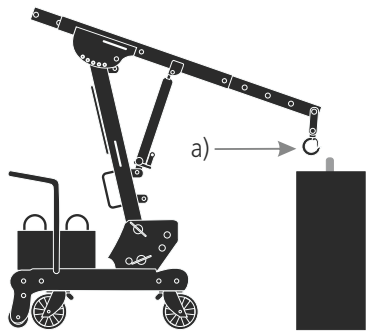
Operation MFC750 All Types

Loading. Lowering. Raising.

Set up the MFC on firm and level ground only.

Ensure that all safety brakes on the chassis are engaged during set up.

1. Loading:

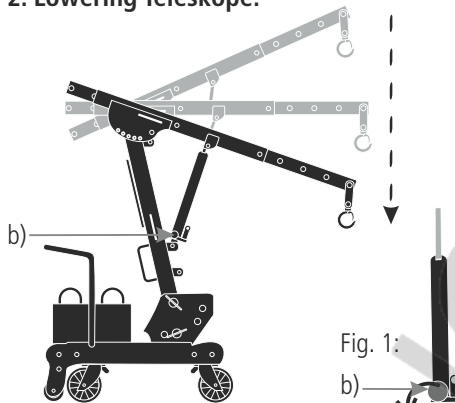


1. To get the Load onto the Crane hook a), move Crane and Load as close as possible to the working area.

2. Attach a shackle to the Load. Make sure the shackle capacity is sufficient and the installation is at the Load center.

3. Align the Crane and the Telescope to ensure that the load can be easily connected to the crane hook.

2. Lowering Telescope:

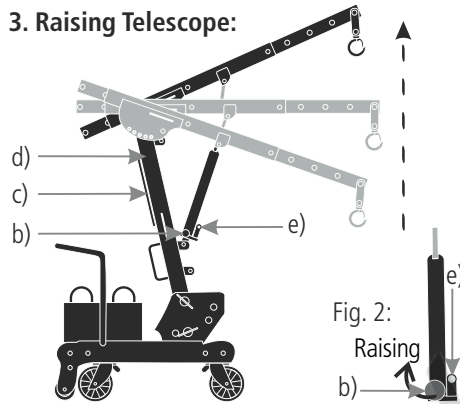


4. To lower the Telescope, turn the handwheel of the hydraulic cylinder b) left to open the valve (Fig. 1).

5. When the Telescope is in position, close the valve again by turning the handwheel to the right (see also: 2. Raising Telescope, Fig. 2).

Note: The further you turn to the left, the faster the Telescope lowers. The less you turn it to the left, the slower the telescope lowers.

3. Raising Telescope:



6. Remove the pump lever c) for the hydraulic cylinder from the bracket on the Main arm d).

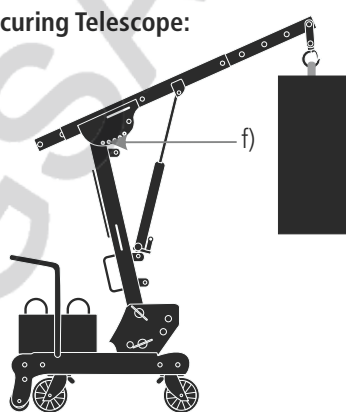
7. Insert the pump lever on the right side of the handwheel e).

8. Pump up the Telescope by up and down movements with the pump lever.

Note: if the Telescope is lowering self-acting:

- 1.) valve is not closed properly, or
- 2.) malfunction of Hydraulic cylinder.

4. Securing Telescope:



9. Lock the Telescope when the load is at working height. Plug in the securing bolt through the locking hole (f), nearest to the main arm.

! ATTENTION:

The lock is not designed to hold the load permanently in working position!

! ATTENTION:

Make sure that the spring hook of the crane hook is completely closed after the shackle has been taken. Otherwise, the load could fall.

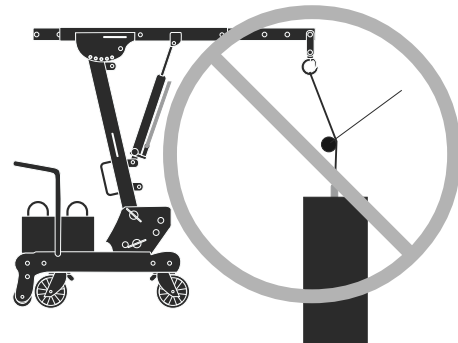
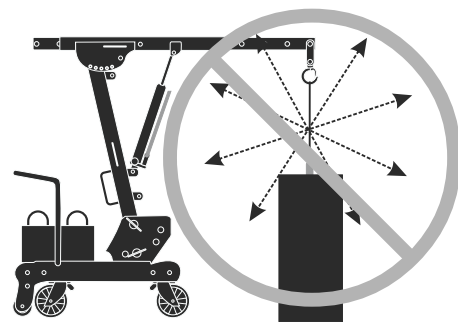


! ATTENTION:

Raise and lower the load generally only vertically! Raise and lower always just up and down.

Never pull the load sideways, forward or backward.

Never use pulleys or similar parts.



- 1. Never operate the crane without fully loaded weight boxes!
- 2. Never operate the crane with only one outrigger!
- 3. Do not move the crane with load and do not leave the crane unattended.

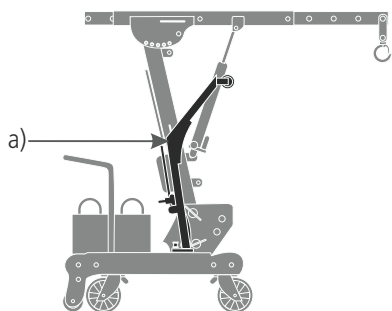
MFC750 with lateral Outrigger

Installing lateral Outrigger.

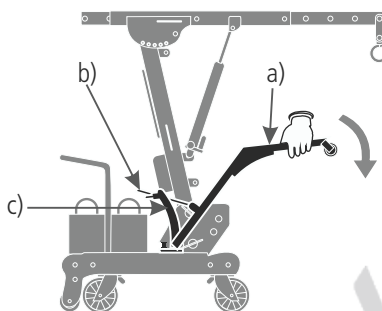
Set up the MFC on firm and level ground only.

Ensure that all safety brakes on the chassis are engaged during set up.

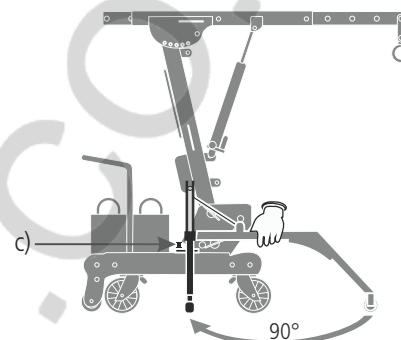
1. Lateral Outrigger in transport position:



2. Lowering Lateral Outrigger:



3. Adjusting Lateral Outrigger:



Note:

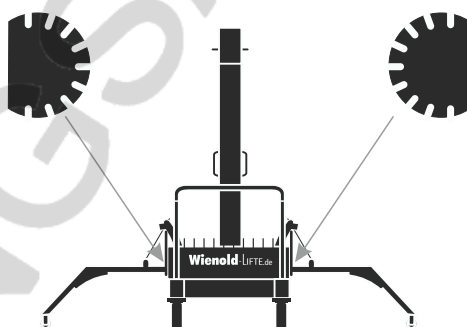
In order to improve the stability, e.g. during wind load, two lateral outrigger a) are available for the MFC (as an Option).

The lateral outrigger are most effective when aligned at 90 ° to the chassis.

1. Hold the outrigger a) securely in one hand.
2. Press the brake pad b) on the support brace c) with the other hand, and lower the outrigger until the wheel has firm ground contact.

3. Pull up the locking pin c) of the adjustment plate on the chassis with one hand, and hold it up.
4. Use the other hand to move the outrigger to the desired position.
5. When the desired position is reached, release the the locking pin into the adjusting plate.
6. Repeat steps 1 to 5 for the outrigger on the opposite side.

Abb. 1



NOTE:

The adjusting plate Fig. 1), locates adjustment notches for the individual alignment of the lateral outriggers.

The lateral outrigger are most effective when aligned at 90 ° to the chassis.

Align the outriggers allways in the same angle on both sides!

DANGER:

Do not operate the crane with only one lateral outrigger !



ATTENTION:

1. Never operate the crane without fully loaded weight boxes!
2. Never operate the crane with only one outrigger!
3. Do not move the crane with load and do not leave the crane unattended.

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Load Positioning

and aligning Casters.

**Note: More Telescope expansion is reducing the Loading capacity.
Only load the MFC when brakes are locked.**

Position the load correctly on the loading device being used. Ensure that the load is adequately secured! Incorrectly positioned and/or incorrectly secured loads may lead to accidents that result in death or serious injury!

Load positioning

1. Determine the weight and load center of the Load.
2. Measure the distance from the shackle to the outer edge of the load (longest distance). Adjust the telescope to prevent that load is not beating against the Main arm.
3. Use payload chart to ensure that the Telescope extension meets to the Load capacities. Prevent overloading.
4. Ensure sufficient load securing.

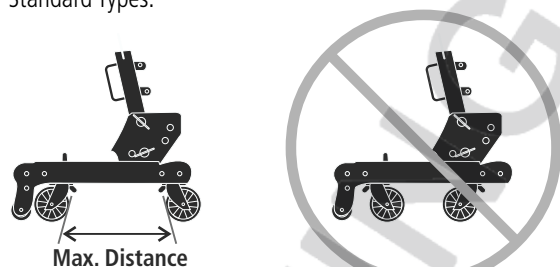
! ATTENTION:

Follow allways the instructions in the loading data sheet. Never exceed the given values.

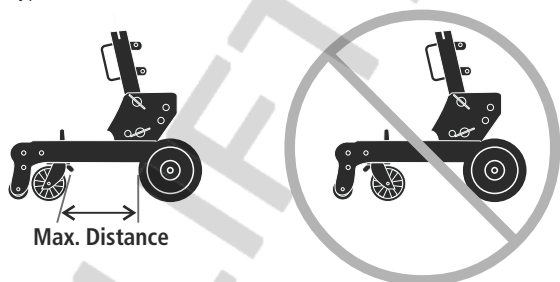
Aligning Swivel Castors

To use the maximum payload, adjust the Swivel castors on the chassis in maximum distance to each other.

Standard Types:



Types with Outdoor Wheels:



Align the loaded Crane

Moving the crane with raised load is restricted to the positioning of loading and unloading.

Moving the crane with fully raised load should only be done in exceptional cases. Move the crane only minimal to adjust the load. Follow the safety rules:

! ATTENTION:

1. When moving the crane, keep the load at the lowest possible level.
2. Make sure the terrain is firm, level and free of obstacles.
3. Make sure that the load is not oscillating.
4. Make sure that the load is sufficiently secured.
5. Avoid jerking, stopping, and jerky steering movements.
6. Keep people away from the crane and from the load.
7. Do not leave the crane with lifted load permanently and/or unattended.

After Each Use

Follow the instructions for setup in reverse Order to prepare the MFC for transport position.

Choose a safe parking space, with firm, level, protected against weathering, without obstacles and traffic.

Loading And Transportation

Basic Procedures..

Before loading, familiarise yourself with the requirements for the loading methods as well as for the vehicles/trailers for lift transportation. Read and obey the respective conditions.



Transport Vehicle/Trailer:

1. The transport vehicle/trailer must be positioned on a firm and level surface.
2. The transport vehicle/trailer must be appropriately secured to avoid rolling while the lift is loaded.
3. Ensure that the transport vehicle/trailer:
 - is big enough
 - has sufficient load capacity / towing capacity
 - has been provided with sufficient securing points.

Trailer With Ramp:

1. Observe the points listed under "Transport Vehicle/Trailer".
2. When using a ramp, make sure that the ramp:
 - is providing enough load-bearing
 - is stable enough,
 - can not bend or break,
 - can not slip,
 - is flat enough.

Lifting Equipment:

1. When loading with a crane, make sure that the load capacity of the crane is sufficient to load the MFC safely.
2. Do not use damaged belts and avoid damages on the belts during the loading.
3. Make sure, the capacities of the belts are sufficiently dimensioned to the weight of the MFC.
4. Observe the weight indications of the MFC, on the production label on the chassis, or in the technical specifications.

Load Securing:

1. Press the parking brakes of all castors which have ground contact.
2. Secure the MFC for transportation with sufficient and strong belts.
3. Ensure that the belts are sufficiently dimensioned and free of Damage.
4. Secure the MFC correctly.



ATTENTION:

Never load the MFC in working position, with counterweights and boxes, or loose parts. They could drop (risk of injury!).

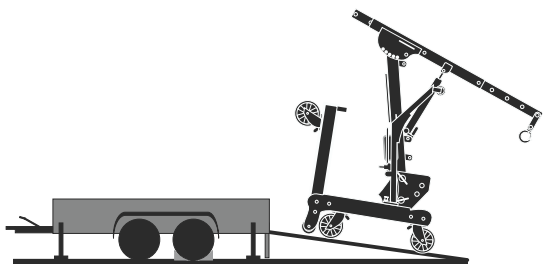
- **If not secured, the MFC could roll back on a ramp unintentionally (danger of injury!).**
- **Caution when loading with MFC: The MFC could oscillate as soon as the Castors have no ground contact (risk of injury!).**
- **When loading, always ensure that persons who are not engaged in the loading process have a sufficient safety distance.**

Loading And Transportation

Basic Procedures..

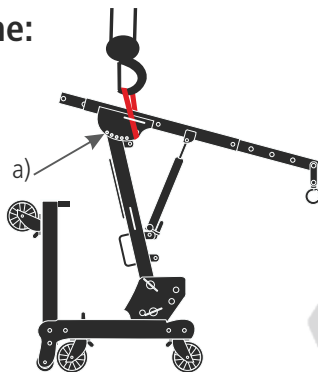
Before loading, familiarise yourself with the requirements for the loading methods as well as for the vehicles/trailers for lift transportation. Read and obey the respective conditions.

Transport Vehicle/Trailer:



1. Place the MFC rearward in transporting position in front of the ramp. Make sure the trailer brake is pulled and the trailer is adequately stabilized as well as secured by chocks.
2. Only push the MFC onto the trailer / into the transporter, if the ramp:
 - is providing enough loading capacity
 - is stable enough,
 - can not bend or break,
 - can not slip,
 - is flat enough.
3. Make sure that:
 - there is no load on the MFC
 - the telescope is lowered
 - weights and boxes have been removed
 - all outrigger are upright and secured.
4. Push the MFC with 2 people over the ramp. Use a winch if available.
5. Position the MFC on the loading area.
6. Lock the parking brakes of all castors with ground contact.
7. Fix the MFC with suitable belts and secure against rolling, moving, tipping, falling and other possible hazards.
8. Pay attention during loading and fixing to the MFC components. Do not damage.

2. Crane:



1. Place the MFC in transporting position under the crane hook.
2. Make sure that:
 - there is no load on the MFC
 - the telescope is fully lowered, unextended and secured
 - weights and boxes have been removed and secured
 - all booms are upright and secured.
3. Secure the telescope by setting the bolt in the first Drilling of the Masthead (Fig. a)).
4. Make sure the crane is providing enough loading capacity.
5. Insert belts, with sufficient strength and with eyelet on each end, through hand grips on main- and telescopic arm on the MFC.

Start from top to bottom

 1. through hand grip on Telescope arm,
 2. through hand grip on Main arm,
 3. in front of the Main arm,
 4. to the other side. From bottom to top
 5. through hand grip on the Main arm,
 6. through hand grip on the Telescope arm.
6. Hitch the belt ends over the Telescope arm and hook into the Crane hook. Make sure that the Crane hook is closed again, before raising the MFC.
7. Raise the MFC carefully and place it slowly on the loading area.
8. Lock the parking brakes of the MFC and secure against rolling away, falling down, etc. Do not damage components of the MFC.
9. Remove the belts from Crane hook.

Unload:

1. To unload the MFC, loosen the belts and unlock the brakes of the castors.
2. Push the MFC slowly to a position with unobstructed and safe access for the crane.
3. Connect the lifting hook of the crane with the belts (see description: „2. Crane, No. 4.“). Make sure that the the crane hook is closed again, before lifting the MFC.
4. Lift the MFC carefully with the crane from the loading area and place slowly on the ground with firm and level surface.
5. Remove the MFC from Crane.



ATTENTION:

Never load the MFC in working position, with counterweights and boxes, or loose parts. They could drop (risk of injury!).

- If not secured, the MFC could roll back on a ramp unintentionally (danger of injury!).
- Caution when loading with MFC: The MFC could oscillate as soon as the Castors have no ground contact (risk of injury!).
- When loading, always ensure that persons who are not engaged in the loading process have a sufficient safety distance.

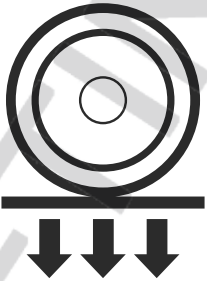
Technical Data

Mini Floor Crane	MFC/K	MFC/K RT*	MFC/Ks	MFC/Ks RT*
Lifting Height:	2,90 m	2,90 m	2,90 m	2,90 m
Transport Position: Height:	1,00 m	1,00 m	1,00 m	1,00 m
Length ¹ :	1,20 m	1,26 m	1,20 m	1,26 m
Width ² :	0,65 m	0,78 m	0,65 m	0,78 m
Working Position: Height:	1,92 m	1,92 m	1,92 m	1,92 m
Length ¹ :	1,80 m	1,86 m	1,20 m	1,26 m
Width:	0,65 m	0,78 m	0,65 m	0,78 m
Width incl. lateral Outrigger ² :	2,55 m	2,55 m	2,55 m	2,55 m
Loading Height min.:	0,85 m	0,85 m	0,85 m	0,85 m
Outrigger Extension Steps in every:	0,12 m	0,12 m	0,12 m	0,12 m
Outrigger Extension Length max.:	1,28 m	1,28 m	1,28 m	1,28 m
Payload: Static (40 cm between hook and front wheel):	900 kg	900 kg	555 kg	555 kg
Payload: Dynamic (40 cm between hook and front wheel):	750 kg	750 kg	463 kg	463 kg
Weight Chassis incl. Telescope:	206 kg	248 kg	168 kg	210 kg
Weight 2 Boxes incl. weights (28 x 16kg):	476 kg	476 kg	476 kg	476 kg

¹ Pure floor space, without Steering bracket.

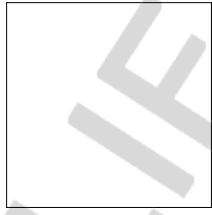
² Lateral Outrigger is optional accessory.

STATIC Payloads MFC 750						
Distance to front wheel:	400 mm	540 mm	700 mm	840 mm	980 mm	1120 mm
MFC 750 K (RT also):	900 kg	880 kg	740 kg	645 kg	565 kg	500 kg
MFC 750 Ks (RT also):	555 kg	455 kg	365 kg	310 kg	275 kg	240 kg
DYNAMIC Payloads MFC 750						
MFC 750 K (RT also):	750 kg	733 kg	617 kg	538 kg	471 kg	--
MFC 750 Ks (RT also):	463 kg	345 kg	263 kg	215 kg	185 kg	--

Ground Pressure MFC 750 (all Models)*					
					
Load:	150 kg	300 kg	450 kg	600 kg	750 kg
Front per Wheel	155 kg	230 kg	305 kg	380 kg	455 kg
Back per Wheel	210 kg	210 kg	210 kg	210 kg	210 kg

*With Standard Equipment.

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