

Lifting masts

HM/HMD



HM

HMD



Nederlands

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1. To the user

1.1 Introduction

The aim of this manual is to inform users about the commissioning, use and maintenance of their new WIFO lifting mast. Also included in this manual are a number of safety instructions to create a safe working environment.

At WIFO-Anema B.V. we aim to continuously improve our products. WIFO-Anema B.V. reserve the right to introduce any changes and improvements deemed necessary without prior notice.

Please read the manual thoroughly and observe the safety procedures before putting the unit into operation. Contact your dealer for any further questions or concerns you may have.

We trust that your WIFO lifting mast will provide many years of useful service.



ATTENTION:

Carefully read this manual before you put the machine into operation and act upon all directions that are given. This is to guarantee its safe, trouble-free operation.

Keep this manual in a safe place for future reference!

WIFO-Anema B.V.


Dealer:


1.2 Language and translations

This manual is a translation of the original Dutch version. In case of discrepancies between translations and the Dutch version, the Dutch text prevails.

1.3 Safety precautions and warnings

Please read this manual before you put the machine into operation for the first time, and observe the safety instructions at all times. The most important instructions are marked with a symbol.


	<p><i>This symbol is used for all important safety instructions throughout this manual. Carefully observe the instructions and be very cautious.</i></p>
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	<p><i>This symbol is used for all important actions that should not be carried out under any circumstances. Carefully observe these prohibitions.</i></p>
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Any person in charge of the commencement of operation, the operation itself or the maintenance of the machine is urged to carefully read and observe the following instructions.

1.3.1 Safety precautions

The following safety instructions apply to all types of WIFO Lifting masts. No distinction is made with regard to the type of lifting vehicle used.

	<p><i>Operate the mast only from the driver's seat of the tractor. Ensure that there is adequate visibility of the work activities from this position .</i></p>
	<p><i>At all times make sure that everybody is out of range of the working range from the lifting mast and never stand under the box/pallet or lifting mast. Please be aware of falling products.</i></p>
	<p><i>Never transport people on/with the lifting mast.</i></p>



For lifting operations only use proper lifting pallets and boxes .

Place the forks as wide as possible in order to get the greatest possible stability of the load.

Load the pallet or box so that the load cannot fall off unexpectedly. Distribute the load as evenly as possible on both forks. Keep the center of gravity of the load as close to the fork carriage.


Transport objects with the load as low as possible to keep the tractor as stable as possible. Ensure that there is sufficient pressure on all 4 wheels of the tractor, also pay attention to the moving of the center of gravity when lifting, lowering and other activities and especially pay attention to the rough terrain and slopes when working. If desired, use counterweights and / or twin wheel. Or set the track width of the tractor wider.

Make sure that the operating lever for operating the cylinder (s) may not be confused with other control levers to prevent inadvertent tilting.

Make sure the hydraulic hoses and any power cables do not get jammed when operating the lifting mast. Make sure that when lifting or lowering the mast it doesn't hit the tractor .

You can only turn off the tractor when the lifting mast is in the lowest position. Ensure that the combination cannot make any sudden movements, if the combination is not used. If the mast is removed and set aside, it should be supported by the support legs. Place the machine on a firm, flat surface.

1.3.2 Safety stickers and warning signs

	<p>A safe working environment also requires personnel to be well-informed about the various safety stickers on the machine. Be aware of the hazards they warn you to look out for.</p> <p>Replace any loose, illegible or missing stickers.</p>
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Several safety stickers have been put onto the machine. The meaning of the stickers on this machine is as follows :




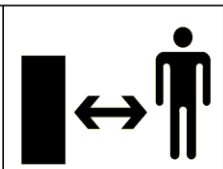
				<table border="0"> <tr> <td>NL</td> <td>Het totaal van de massa van de machine en de lading mag de hefcapaciteit niet overschrijden.</td> </tr> <tr> <td>D</td> <td>Gewicht Anbaugerät und Last zusammen, darf Tragfähigkeit nicht überschreiten.</td> </tr> <tr> <td>F</td> <td>La capacité de levage doit être supérieure au total de la masse de la machine et du chargement.</td> </tr> <tr> <td>GB</td> <td>The weight of the attachment together with the load may not exceed the lifting capacity.</td> </tr> </table>	NL	Het totaal van de massa van de machine en de lading mag de hefcapaciteit niet overschrijden.	D	Gewicht Anbaugerät und Last zusammen, darf Tragfähigkeit nicht überschreiten.	F	La capacité de levage doit être supérieure au total de la masse de la machine et du chargement.	GB	The weight of the attachment together with the load may not exceed the lifting capacity.	<table border="0"> <tr> <td>NL</td> <td>Zet de machine in de laagste stand indien deze niet gebruikt wordt.</td> </tr> <tr> <td>D</td> <td>Die Maschine muß sich in der untersten Position befinden bei Nichtgebrauch.</td> </tr> <tr> <td>F</td> <td>La machine soit sur la position la plus basse lorsque la machine n'est pas utilisée.</td> </tr> <tr> <td>GB</td> <td>The machine should be in the lowest position when the machine is not used.</td> </tr> </table>	NL	Zet de machine in de laagste stand indien deze niet gebruikt wordt.	D	Die Maschine muß sich in der untersten Position befinden bei Nichtgebrauch.	F	La machine soit sur la position la plus basse lorsque la machine n'est pas utilisée.	GB	The machine should be in the lowest position when the machine is not used.
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GB	The machine should be in the lowest position when the machine is not used.																				

Figure 1.3.1. Safetysticker WIFO

1.3.3 Placement of safety stickers on the machine

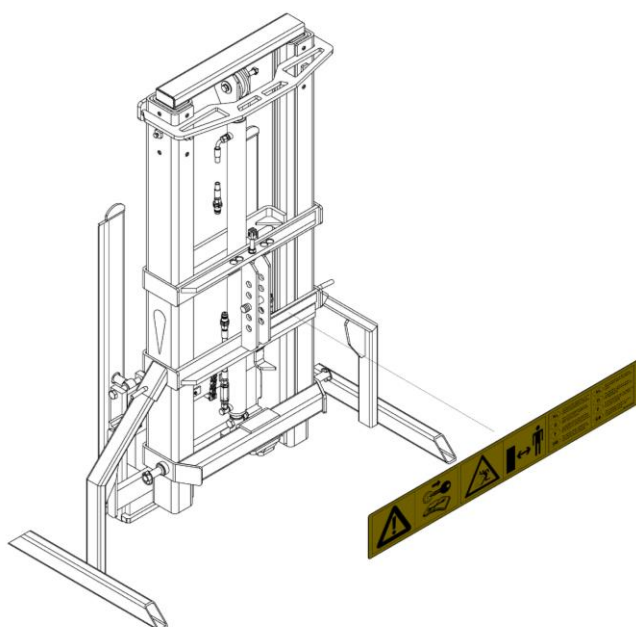


Figure 1.3.2-Placement safety sticker for HM

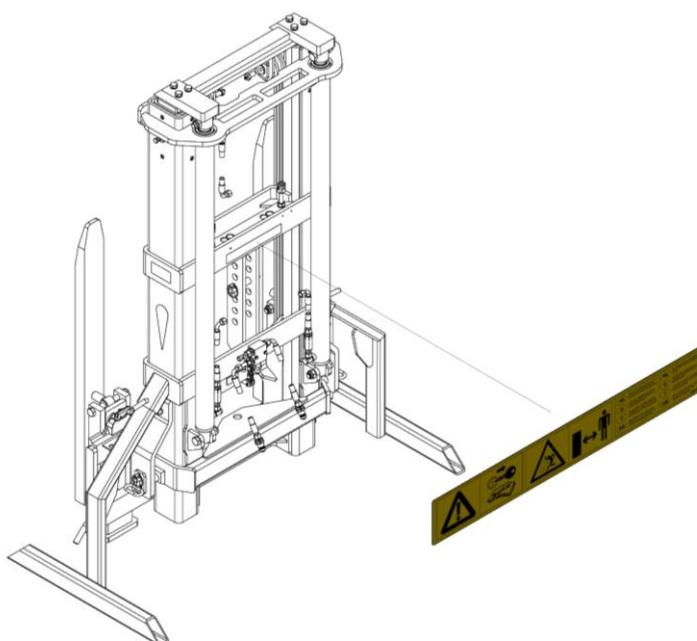


Figure 1.3.3-Placement safety sticker for HMD

1.4 Purpose of use

The WIFO HM/HMD lifting masts are only suitable for lifting boxes, pallets and bales (in combination with a WIFO bale clamp). The lifting masts are available for use on a tractor with a standard cat. II three-point hitch.



ATTENTION:


The lifting capacity of the tractor must exceed the total mass of the lifting mast, the box / pallet and its load. The tractor must be equipped with a double action hydraulic connection on the telescopic boom.

Do not use the HM/HMD lifting mast for carrying people under any circumstances!

1.5 Liability

Any person working with or on the machine must have read this manual. The machine is to be used for its intended purpose only. Included in the intended purpose are, among other things:

1. Work must be carried out in accordance with the directions and within the functional restrictions (e.g. maximum hydraulic working pressure) as outlined in the regulations. Use only sound and appropriate tools.
2. Electric/electronic equipment and accessories (e.g. cables) must be treated in accordance with the general accepted policy for using non-waterproof portable electric and electronic equipment, such as:
 - a) Storing and keeping in a clean, dry environment away from rodents and the like; and
 - b) Protecting the equipment against severe, uncushioned shocks and water (precipitation).
3. Use only original or compatible spare parts. Such parts must be assembled as directed (e.g. by observing the recommended tightening moments). Spare parts (as well as lubricants) are considered compatible only if explicitly approved by WIFO or in the event that the customer is able to prove they possess the required properties for the purpose(s) they are used.
4. Use only lubricants that meet the specifications as described in the directions.
5. Always observe the local regulations in terms of accident prevention, safety, traffic and transport.
6. Only trained personnel with knowledge of the possible hazards have permission to work with/on the machine.
7. WIFO-Anema B.V. will assume no liability in any shape or form for losses or damage caused following modifications to the machine, which have not been explicitly approved by WIFO.

	<p><i>Noncompliance with the rules and directions from this manual will be considered as serious negligence, for the consequences of which WIFO-Anema B.V. accepts no liability whatsoever. In such cases, the user will bear the full risk of his actions.</i></p>
	<p><i>WIFO-Anema B.V. is continuously working on the improvement of its products. For that reason, WIFO-Anema B.V. reserves the right to introduce any changes and improvements deemed necessary without prior notice. However, it does not imply an obligation to make any such changes or improvements to machines bought by customers in the past.</i></p>

1.6 Warranty

WIFO-Anema B.V. guarantees the soundness of its products in terms of materials used and/or structural defects. However, in any event this warranty is limited to the free-of-charge replacement or repairs of the defect product, or part thereof. WIFO-Anema B.V. assumes no liability for any loss or damage arising from faulty deliveries and/or the breakdown of purchased goods before the warranty period has expired. **The warranty period for this product is twelve months.**

2. Technical data

2.1 General technical data

Type	HM 200/1000	HM 240/1000	HM 280/1000
Lifting height	2000 mm	2400 mm	2800 mm
Lifting capacity	1000 kg	1000 kg	1000 kg
Clearance height	1800 mm	2000 mm	2200 mm
No. of cylinders	1	1	1
No. of chains	1	1	1
Weight	435 kg	460 kg	480 kg

Table 2.1.1- Types of WIFO lifting masts with a lifting capacity up to 1000 kg

Type	HM 200/1600	HM 240/1600	HM 280/1600
Lifting height	2000 mm	2400 mm	2800 mm
Lifting capacity	1600 kg	1600 kg	1600 kg
Clearance height	1800 mm	2000 mm	2200 mm
No. of cylinders	1	1	1
No. of chains	1	1	1
Weight	440 kg	465 kg	485 kg

Table 2.1.2- Types of WIFO lifting masts with a lifting capacity up to 1600 kg

Type	HMD 200/2000	HMD 240/2000	HMD 280/2000
Lifting height	2000 mm	2400 mm	2800 mm
Lifting capacity	2000 kg	2000 kg	2000 kg
Clearance height	1800 mm	2000 mm	2200 mm
No. of cylinders	2	2	2
No. of chains	2	2	2
Weight	665 kg	695 kg	725 kg

Table 2.1.3- Types of WIFO lifting masts with a lifting capacity up to 2000 kg

Type	HMD 240/2500	HMD 280/2500	HMD 340/2500	HMD 400/2500
Lifting height	2400 mm	2800 mm	3400 mm	4000 mm
Lifting capacity	2500 kg	2500 kg	2500 kg	2500 kg
Clearance height	2000 mm	2200 mm	2500 mm	2800 mm
No. of cylinders	2	2	2	2
No. of chains	2	2	2	2
Weight	710 kg	740 kg	795 kg	845 kg

Table 2.1.4- Types of WIFO lifting masts with a lifting capacity up to 2500 kg

The lifting capacity has been calculated at 18 mpa (180 Bar) working pressure.

The vehicle clearance height has been calculated with the drawbars 300 mm of the ground.

The weight of the lifting mast with sideshift is 27kg more.

Type	HM	HMD
Operation pressure hydraulics	Max. 18 Mpa (180 Bar)	Max. 18 Mpa (180 Bar)
Frame width	525 mm	770 mm
Fork carriage width	1000 mm	1200 mm
Fork length	1190 mm	1180 mm
Frontal extension length	(Distance from center lower hitch pin to the front of the upright leg) 220 mm without sideshift/160 mm with sideshift	
Attachment	The tractor must be equipped with a standard Category II three-point hitch	

Table 2.1.5- General data HM/HMD lifting masts

Equipment:

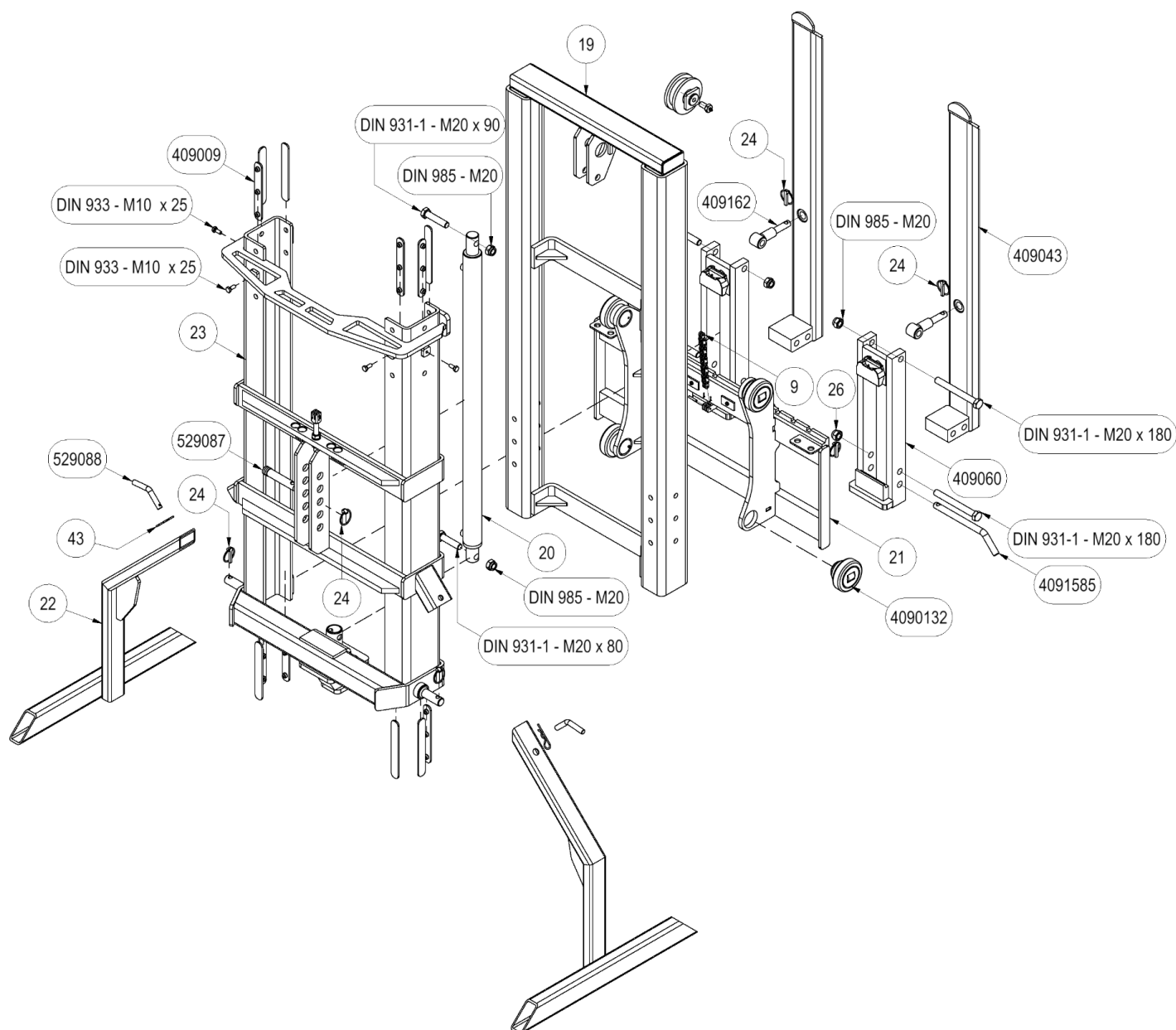
- Folding and width adjustable forks
- Towbar (Maximum towing load 2000 kg horizontal, vertical 400 kg)
- FEM II fork carriage on all models >2000kg capacity.

Options:

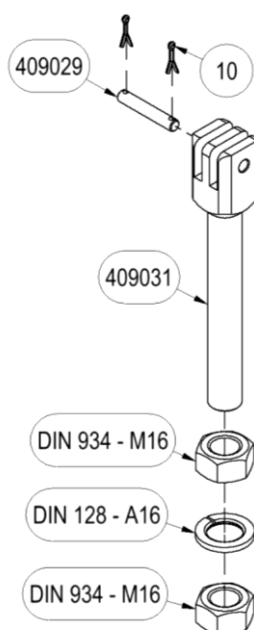
- With/without Sideshift
- With/without hydraulic top bar/tilt Cylinder
- With/without double acting hydraulic connection on the fork carriage
- With/without valve block
- With/without FEM II fork carriage on models till 1600 kg

2.2 HM

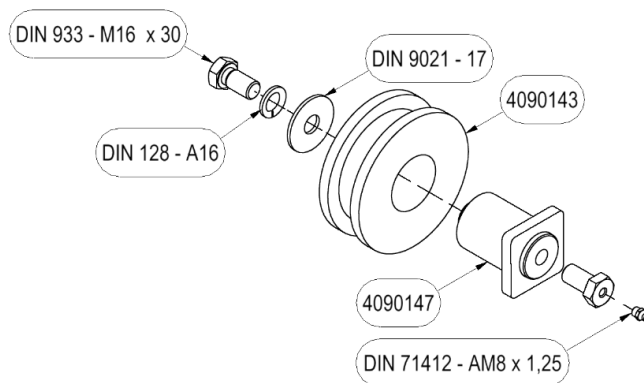
2.2.1 Parts list



Description	Sparepartnummer
Flyerchain	9
• Flyerchain HM 200/1000 and HM 200/1600	409022
• Flyerchain HM 240/1000 and HM 240/1600	409023
• Flyerchain HM 280/1000 and HM 280/1600	409024
Inner frame HM	19
Hydraulic cylinder	20
• DW 50-40-1000 HM 200/1000	409098
• DW 50-40-1200 HM 240/1000	409099
• DW 50-40-1400 HM 280/1000	4090100
• DW 60-50-1000 HM 200/1600	409101
• DW 60-50-1200 HM 240/1600	409102
• DW 60-50-1400 HM 280/1600	409103
Fork carriage HM 1000-1600 kg	21
Support leg HM-HMD	22
Outer frame HM	23
Wear strip lifting masts	409009
Chainblock pin	409029
Chain tensioner HM-HMD	409031
Folding fork HM	409043
Upright leg HM-HMD	409060
Eyepin folding fork HM-HMD-HMZ	409162
Toppin (I) - R19 - L076	529087
Pin support leg M&S	529088
Chainrol HM-HMD	4090143
Chain rol shaft HM-HMD	4090147
Locking pin folding fork HM-HMD-HMZ	4091585



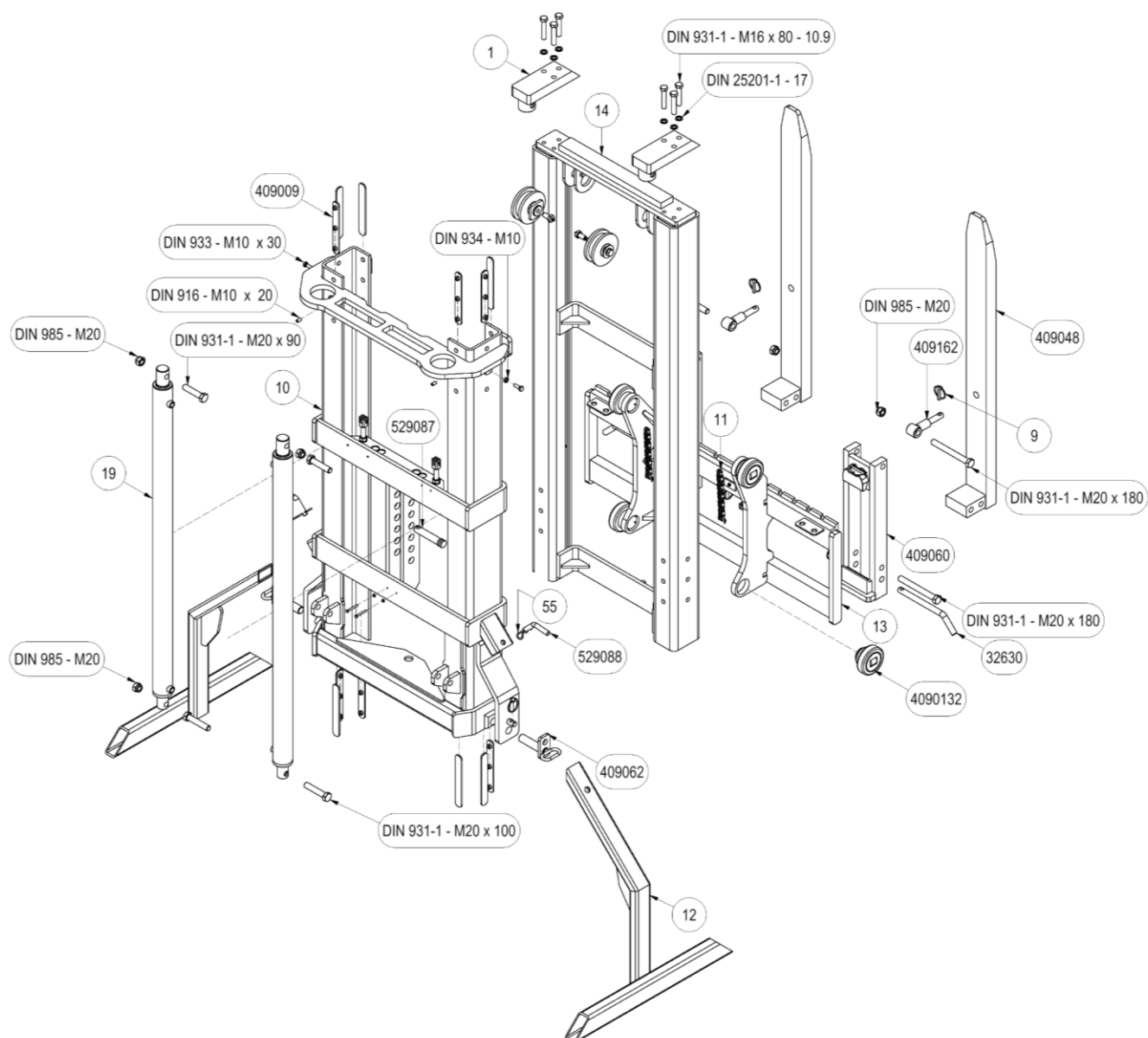
Description	Sparepartnummer
Split pin 2x12 EV	10
Chainblock pin	409029
Chain tensioner HM-HMD	409031



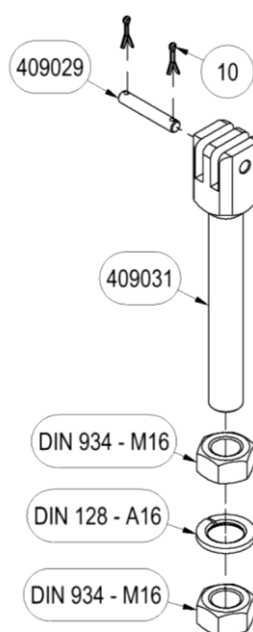
Description	Sparepartnummer
Chain rol HM-HMD Ø125x50-L45-PA/GB	4090143
Chain rol shaft HM-HMD	4090147

2.3 HMD

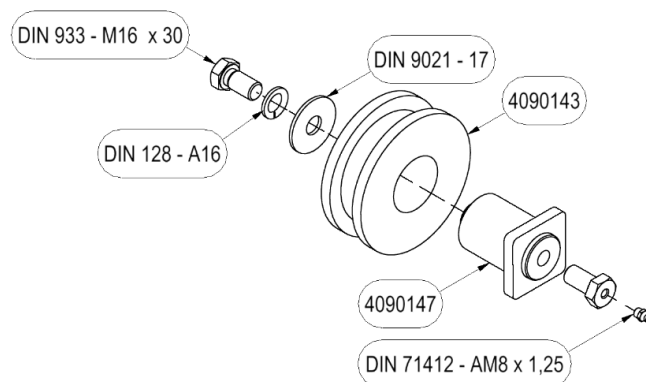
2.3.1 Parts list



Description	Sparepartnummer
Outer frame HMD	10
Flyerchain	11
• Flyerchain	
Support leg HM-HMD	12
Fork carriage FEM II for HMD	13
Inner frame HMD240/2000/2500	14
Hydraulic cylinder	19
• DW 50-40-1000 HMD 200/2000	409098
• DW 50-40-1200 HMD 240/2000	409099
• DW 50-40-1400 HMD 280/2000	409100
• DW 60-50-1200 HMD 240/2500	409102
• DW 60-50-1400 HMD 280/2500	409103
• DW 60-50-1700 HMD 340/2500	409104
• DW 60-50-2000 HMD 400/2500	409105
Wearing strip lifting masts	409009
Chain block pin	409029
Chain tensioner HM-HMD	409031
Folding fork HMD-HMZ	409048
Upright leg HM-HMD	409060
Lift arm pin HMD	409062
Eyepin folding fork HM-HMD-HMZ	409162
Toppin (I) - R19 - L076	529087
Pin support leg M&S	529088
Chain rol HM-HMD	4090143
Chain rol shaft HM-HMD	4090147



Description	Sparepartnummer
Split pin 2x12 EV	10
Chainblock pin	409029
Chain tensioner HM-HMD	409031



Beschrijving	Sparepartnummer
Chain rol HM-HMD Ø125x50-L45-PA/GB	4090143
Chain rol shaft HM-HMD	4090147

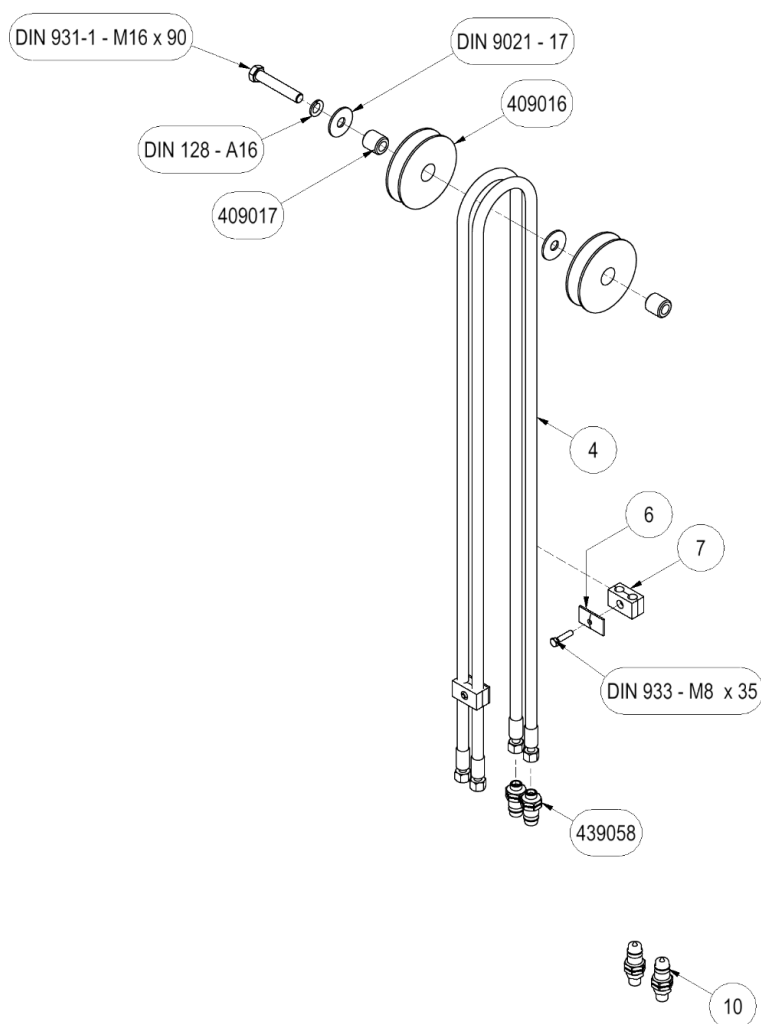
2.3.2 Commissioning of a HM/HMD lifting mast

1. Make sure that the drawbars of the three-point hitch of the tractor are at the same height. Connect the lifting mast to the category II three-point hitch of the tractor. Use proper spring clips. Adjust the topline in such a way that the forks of the fork-lift mast are in a horizontal position. (See using a tilt cylinder / hydraulic top link "accessories") The lateral movement of the mast in the linkage should be minimal. This is set with the stabilizers of the linkage.
2. In case of a fork lift mast with a lifting height of 2 meters or more, it is a requirement by law to provide the tractor-linkage with a blocking device in order to prevent tipping over of the fork lift mast.
3. Connect the hydraulic hoses. Make sure the hydraulic hoses are clean before connecting them to the rapid-action couplings, to prevent any debris from entering the hydraulics of the machine.
4. Subsequently check that the hydraulic hoses can move freely and check that the system is not leaking oil.
5. Remove the support legs.

De WIFO lifting mast is now ready to be used.

2.4 Hydraulic connection on fork carriage (accessory)

2.4.1 Parts list



Description	Sparepartnummer
Hydraulic hose	4
• Hydraulic hose L=3000 W18-P12 HM(D) 200	4
• Hydraulic hose L=3200 W18-P12 HM(D) 240	4
• Hydraulic hose L=3800 W18-P12 HM(D) 280	4
• Hydraulic hose L=4500 W18-P12 HMD 340	4
• Hydraulic hose L=5000 W18-P12 HMD 400	4
Covering plate doublel 15mm	6
Double line plate 15mm	7
Quick connector. 1/2 Male M18	10
Hoserol Ø125 HM-HMD	409016
Spacer bushing VV-35 - HM(D)	409017

2.4.2 Explanation hydraulic connection on fork carriage

Purpose of use:

The fork lift mast can be equipped with a hydraulic connection to the fork carriage to allow the connection of ancillary hydraulic cylinders or hydraulic motors to the fork carriage. The tractor must be equipped with an extra double action hydraulic installation or operation must be done via an extra valve block.

Commissioning:

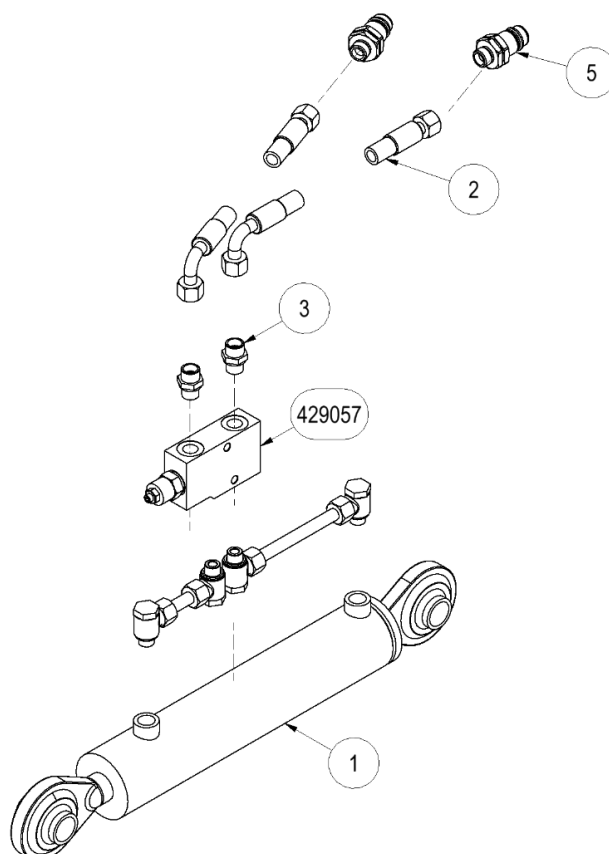
Make sure the mast and the fork carriage is in the lowest position. Loosen the chain (s) by slightly turning the nuts on the chain tightener. Remove the bolt(s) in the hose roll and replace this (these) by M16x120 bolt(s) which fasten the hose roll and the bushes for the hose roll at the same time. Tighten securely. Place the hoses on the roll. Mount the hydraulic connectors to the mounting plate on the fork carriage. Secure the hoses to the forak carriage with hose clamps. Don't tighten the hoses too tight. Connect the hoses to a double acting hydraulic connection. It is imperative here that the shortcuts are clean so that no dirt enters the hydraulic system of the machine.

Manual:

Take care that the hydraulic hoses cannot become entangled. Take care that the operating handles cannot become mutually entangled with other operating handles in order to prevent unintentional operating.

2.5 Hydraulic tilting cylinder (top link) (51a/51b)

2.5.1 Parts list



Description	Sparepartnummer
Tiltint cylinder Nr.51a	
• Tilting cylinder/toplink 51a DW50-25-200	409093
• Tiltint cylinder/toplink 51b DW60-30-250	409095
Hydraulic hose L= 800 W18-W18/90'	2
Straight coupling 12L - G 3/8"	3
Balancing valve 3/8" EW	429057
Quick connector 1/2 Male M18 Uitw.	439058

2.5.2 Explanation hydraulic tilting cylinder (top link) (51a/51b)

Purpose of use:

The fork lift mast can be equipped with a tilting cylinder/hydraulic top link to facilitate leveling of the forks. The tractor must be equipped with an extra double action hydraulic installation or operation must be done via an extra valve block.

Commissioning:

Attach the tilting cylinder/hydraulic top link by means of the top pin and the securing clip 9x11. Connect the hydraulic hoses. It is imperative here that the shortcuts are clean so that no dirt enters the hydraulic system of the machine.

Manual:


Keep the load near the tractor during transportation, with the aid of the tilting cylinder/hydraulic top link. When loading and unloading the forks keep them as flat as possible using the tilt cylinder/hydraulic top link. Take care that while operating the fork lift mast the fork lift mast cannot touch the tractor. Take care that the hydraulic hoses cannot become entangled. Take care that the operating handles for controlling the tilt cylinder/hydraulic top link cannot become mutually entangled with other operating handles in order to prevent unintentional operating.

3. Faults and maintenance

This manual contains the necessary safety instructions for maintenance work on the machine. Compliance with these instructions is mandatory to ensure personnel safety and to keep the machine in optimal condition.

3.1 General safety regulations

It is mandatory to wear personal protective equipment (PPE) when performing maintenance work on the machine. This is to protect against potential hazards such as mechanical risks, sharp edges, hot surfaces, and harmful substances.

	<p><u>N.B.</u> <i>Please read the instruction manual prior to any maintenance to the machine. Turn off the engine and remove the key from the ignition while maintenance is carried out on the machine !</i></p>
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3.2 Required personal protective equipment (PPE)

Maintenance staff must wear at least the following PPE:

- **Safety goggles** - To protect against dust, sparks, or flying debris.
- **Gloves** - Suitable for the specific tasks (cut-resistant, heat-resistant, or chemical-resistant gloves, depending on the task).
- **Safety shoes** - With a steel or composite toe cap and a non-slip sole.
- **Hearing protection** - If working in a noisy environment (>80 dB(A)).

3.3 Specific safety measures

- Always ensure that the lift mast is in the lowest position when performing maintenance or repairs on the lift mast.
- Prevent unintentional operation of the cylinder(s) or movement of the lift mast during maintenance by switching off the engine of the lifting device and removing the key from the ignition. Also ensure proper support of the lift mast.
- Additional measures can be taken by disconnecting the hydraulic hoses.
- Prevent unauthorized persons from entering the work zone.
- Use the correct tools and follow the manufacturer's instructions.
- After maintenance, the machine must be checked for proper operation before being put back into service.

3.4 Compliance and responsibility

- Failure to comply with these PPE regulations may result in serious injuries or harm.
- Employers and employees share responsibility for the proper use of PPE.
- Regularly check whether the PPE is in good condition and replace it if necessary.

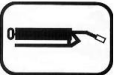
3.5 Preventive maintenance and lubrication


After the first 8 working hours:


- Tighten the connections and fittings of the hydraulic lines.
- Tighten all bolts.

After every 40 hours working hours:

- Prevent rust on the chain by lubricating it regularly with oil. If the chain is badly soiled, remove it and clean it in diesel oil. If there is any visible wear on the chain, replace it immediately. Working with it brings life-threatening risks with it.

	<p><i>This sticker shows the position of a grease nipple on the machine. Lubricate the machine after every 10 working hours. Recommended lubricants include SAE 30 oil and Grade 2 grease based on lithium.</i></p>
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	<p><i>Regularly check the hydraulic section for any leaks. Never try and search for leaks or stop a leak by hand. Liquid under high pressure can easily penetrate skin and clothing, and may cause serious injuries. Replace any damaged hydraulic hoses to prevent them from breaking and any accidents as a result.</i></p> <p><i>Regularly check the oil level of the hydraulic system of your forklift truck / tractor!</i></p>
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	<p><i>Always use original WIFO parts for replacement in order to comply with the warranty terms and conditions.</i></p>
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EC DECLARATION OF CONFORMITY

(In accordance with the Machinery Directive 2006/42/EC, Annex II, A)

Name: **WIFO-Anema BV**

Address: **Hegebeintumerdyk 37, 9172GP, Ferwert, Nederland**

Telephone: **+31 (0)518411318**

E-mail: **info@wifo.nl**

Declares that the following machine complies with the relevant directives:

Typeplaatje WIFO

Description of the machine:

The **WIFO HM/HMD** lift mast is a hydraulically operated lifting device mounted on the front or rear of a tractor. Using one or two hydraulic cylinders, it is designed to lift and move loads efficiently.

Applied European Directives:

- Machinery Directive 2006/42/EC

Applied Harmonized Standards:

- EN ISO 12100:2010 – General safety principles

Name: **Wytze Anema**

Position: **Managing Director**

A handwritten signature in black ink, appearing to be 'Wytze Anema', written over a horizontal line.

Location: **Ferwert**

Date: **01-01-2025**