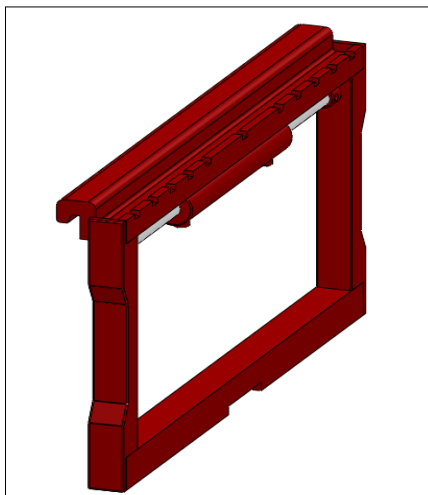
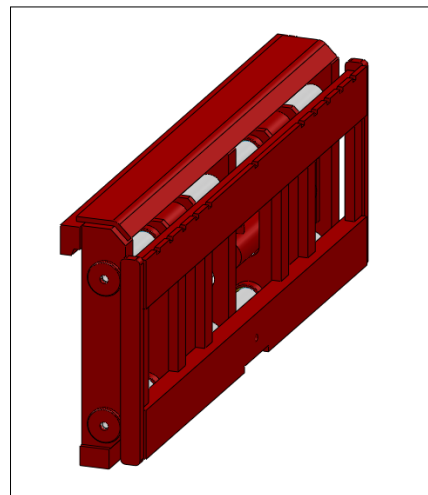


HS-2/HS-3/HSR/DSD-500/DSD-600

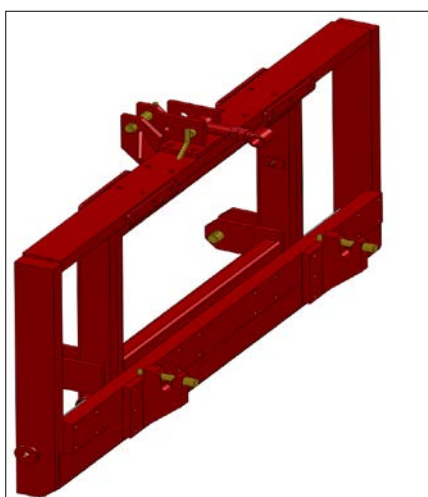
Sideshifts



HS-2/HS-3



HSR-2/HSR-3



DSD-500



DSD-600





English

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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 sideshift. 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 sideshift 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 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>
---	--

	<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>
---	---

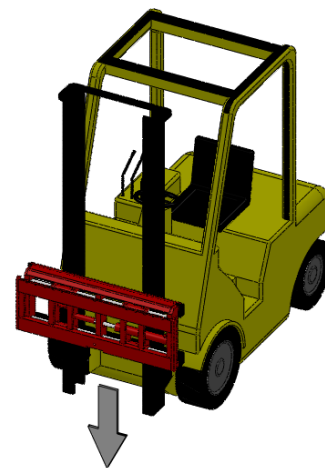
Any person in charge of the commencement of operation, the operation itself or the maintenance of the machine is urged to carefully read and observe the following instructions.

1.2.1 Safety precautions


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




Persons must not stand below the sideshift with the load. Make sure that everyone stays out of the working area of the sideshift.




Keep the load on the sideshift as low as possible during transportation to maximise the stability of the tractor/lifting vehicle.

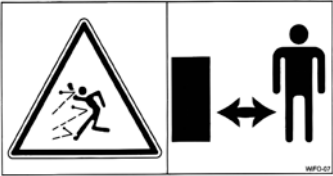
	<p><i>Do not allow anyone to hitch a ride on the sideshift.</i></p>
	<p><i>The sideshift must only be operated from the driver's position in the vehicle. Ensure that there is adequate visibility of the work activities from this position.</i></p>
	<p><i>Make sure the operating lever for side-shifting is not mixed up with any other operating lever to prevent inadvertent side-shifting.</i></p>
	<p><i>Make sure the hydraulic hoses and any power cables do not get jammed and that the sideshift is able to move freely.</i></p>
	<p><i>Ensure that the vehicle's tires are adequately inflated in order to optimize the stability and steering of the vehicle/sideshift combination. Account must be taken when working on rough ground or on slopes. Use counterweights and/or double tires if necessary.</i></p>
	<p><i>The sideshift must be placed in its lowest position when parking the lifting vehicle. Ensure that the sideshift cannot make any unintended movements while the vehicle is not in use.</i></p>
	<p><i>Place the sideshift with the front on a flat, stable surface after it has been removed from the forklift truck / mast for storage.</i></p>

1.2.2 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>
---	---

Several safety stickers have been put onto the machine. The meaning of the stickers on this machine is as follows:

	<p><u>N.B.:</u> 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!</p>	<p>1</p>
---	--	----------

	<p><u>Danger:</u> Always keep at a safe distance from the machine!</p>	<p>2</p>
--	---	----------

1.2.3 Location of the safety stickers on the machine

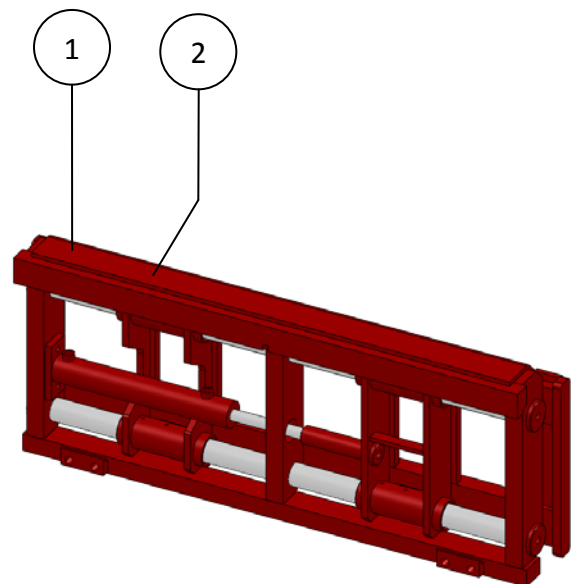
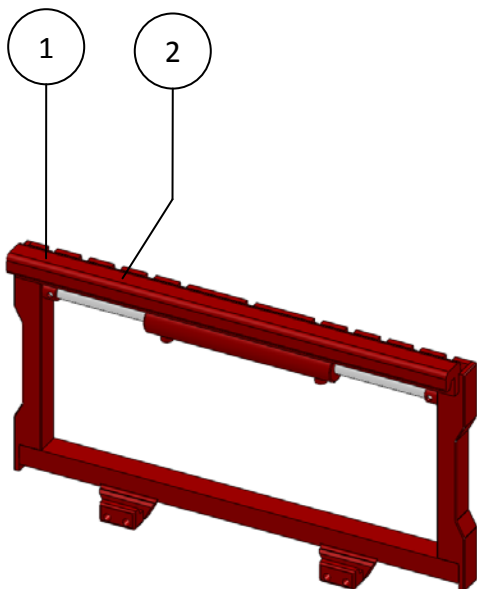


Figure 1.2.1- Location of safety stickers for HS-2/HS-3 sideshift

Figure 1.2.2- Location of safety stickers for HSR-2/HSR-3 sideshift

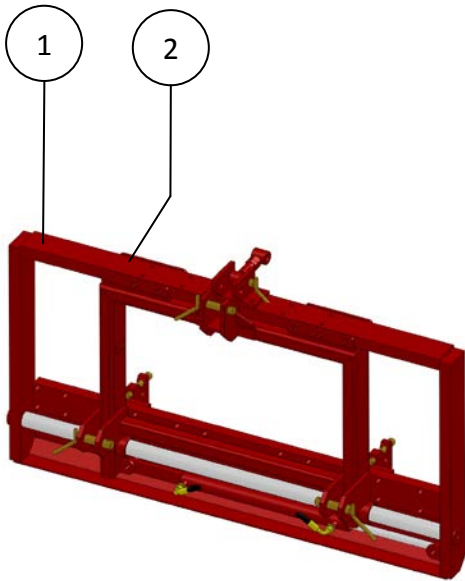


Figure 1.2.3- Location of safety stickers for DSD-500 sideshift

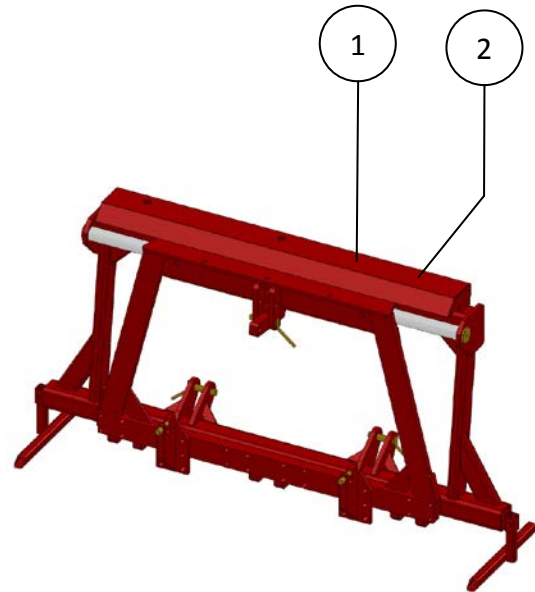


Figure 1.2.4- Location of safety stickers for DSD-600 sideshift

1.3 Purpose of use

WIFO sideshifts are suitable only for the transportation and side-shifting of pallets and boxes.

The WIFO **HS-2/HS-3** sideshifts are available for attachment on a FEM II or FEM III fork carriage of a forklift truck or lifting mast, provided that the total weight of the sideshift and the attached equipment does not weigh more than 2500kg for the HS-2 and 3500kg for the HS-3.

The WIFO **HSR-2/HSR-3** sideshifts are available with attachment parts on telescopic loaders, shovels, forklift trucks etc. The maximum load for the HSR-2 sideshift is 2500kg and for the HSR-3 sideshift 3500kg.

The WIFO **DSD-500/DSD-600** sideshifts are suitable for use on tractors with a standard cat. II three-point hitch, provided that the total weight of the sideshift and the attached equipment does not weigh more than 1500kg for the DSD-500 and 3000kg for the DSD-600. This type of sideshift can also be used in combination with a PTO.



ATTENTION:

The capacity of the forklift truck or lifting mast must exceed the total mass of the sideshift, box or pallet and load. The forklift truck or lifting mast must be equipped with a double action hydraulic connection at the fork carrier, as a minimum.

Do not use the sideshift for carrying people under any circumstances!

1.4 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.



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.

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.

1.5 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	HS-2	HS-3
Linkage	FEM II	FEM III
Max. working pressure	18 Mpa (180 bar)	18 Mpa (180 bar)
Fork carrier width	1200 mm	1200 mm
Height	450 mm	570 mm
Sideshift-stroke	200 mm	200 mm
Frontal extension length	63 mm	75 mm
Center of gravity	26 mm	30 mm
Max. load	2500 kg	3500 kg
Weight	60 kg	100 kg

Table 2.1.1-HS sideshifts

Type	HSR-2	HSR-3
Linkage	FEM II	FEM III
Max. working pressure	18 Mpa (180 bar)	18 Mpa (180 bar)
Fork carrier width	1200 mm	1200 mm
Height	500 mm	500 mm
Sideshift-stroke	150 mm left + right	150 mm left + right
Frontal extension length	140 mm	150 mm
Center of gravity	65 mm	70 mm
Max. load	2500 kg	3500 kg
Weight	230 kg	260 kg

Table 2.1.2-HSR sideshifts for telescopic loaders/shovels/lifting trucks

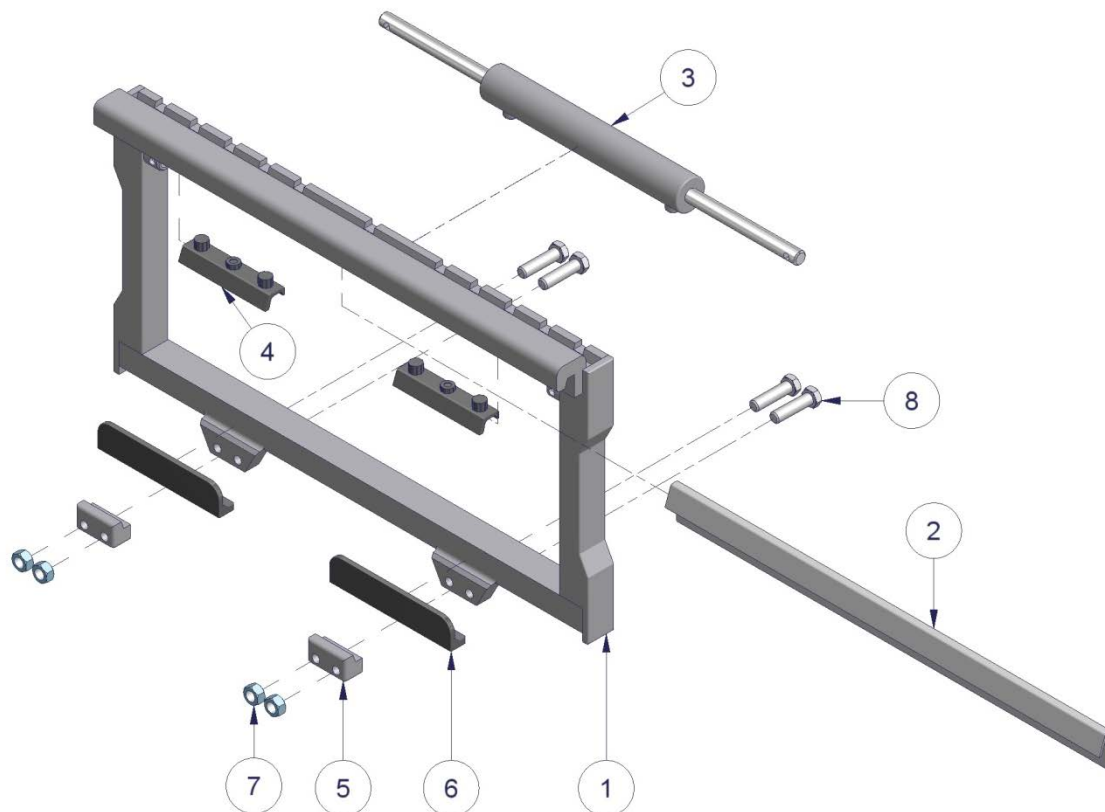
Type	DSD-500	DSD-600
Linkage	Cat. II	Cat. II
Max. working pressure	18 Mpa (180 bar)	18 Mpa (180 bar)
Width	1600 mm	2200 mm
Height	850 mm	1100 mm
Sideshift-stroke ¹	250/500mm	300/600mm
Frontal extension length	310 mm	310 mm
Max. load	1500 kg	3000 kg
Weight	230 kg	475 kg

Table 2.1.3-DSD sideshifts for tractors

¹ Sideshift-stroke is adjustable on the frame of the sideshift. The stroke can be adjusted as 500mm to the left or 500mm to the right, or 250mm to the left and right.

2.2 HS-2/HS-3 sideshift

2.2.1 Parts list



Number	Description
1	Sideshift fork carriage
2	Mounting strip
3	Cylinder
4	Slide bearing above
5	Clamping strip with FEM profile
6	Slide bearing below
7	Nut M16
8	Bolt M16x55

Table 2.2.1-Parts list for HS-2/HS-3 sideshift

2.2.2 Commissioning the HS-2/HS-3 sideshift

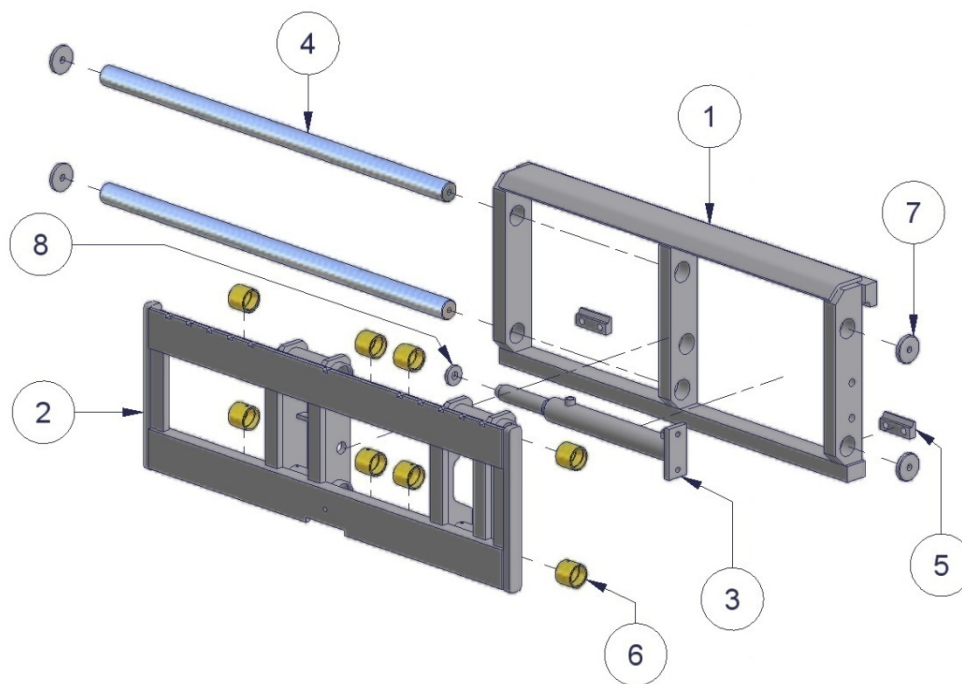
The following instructions apply to a FEM II or FEM III fork carriage of a forklift truck or mast.

1. Remove the clamping strips from the sideshift.
2. Remove the forks from the forklift truck or forklift mast and make sure the fork carrier is straight and clean.
3. Place the sideshift onto the fork carrier of the forklift truck or forklift mast.
4. Attach the clamping strips using two bolts M16x55. Secure these bolts tight! (140 Nm). Make sure there is some clearance between the clamping strips and the fork carriage so it moves freely. This is adjustable with the lateral movement of the clamping strips.
5. Connect the hydraulic hoses of the sideshift to the dual-action connection on the fork carrier. Make sure the hydraulic hoses are clean to prevent any debris from entering the hydraulics of the machine.
6. Subsequently check that the hydraulic hoses can move freely and check that the system is not leaking oil.
7. Remove the locking bolt in the lowest plate of the fork carriage of the sideshift. Attach the forks to the fork carriage and mount the locking bolt.
8. Check the correct operation of the sideshift by controlling the hydraulic functions.

The WIFO HS sideshift is now ready to be used.

2.3 HSR-2/HSR-3 sideshift

2.3.1 Parts list



Number	Description
1	Fixed frame
2	Shiftframe
3	Shift cylinder DW 50-25-300
4	Guiding rod
5	Clamping strip
6	Bronze bearing $\varnothing 59,2 \times 50,4 - L50$
7	Locking ring rod $\varnothing 70 \times 17 - L10$
8	Locking ring cylinder $\varnothing 50 \times 21 - L10$

Table 2.3.1-Parts list for HSR-2/HSR-3 sideshift

2.3.2 Commissioning the HSR-2/HSR-3 sideshift

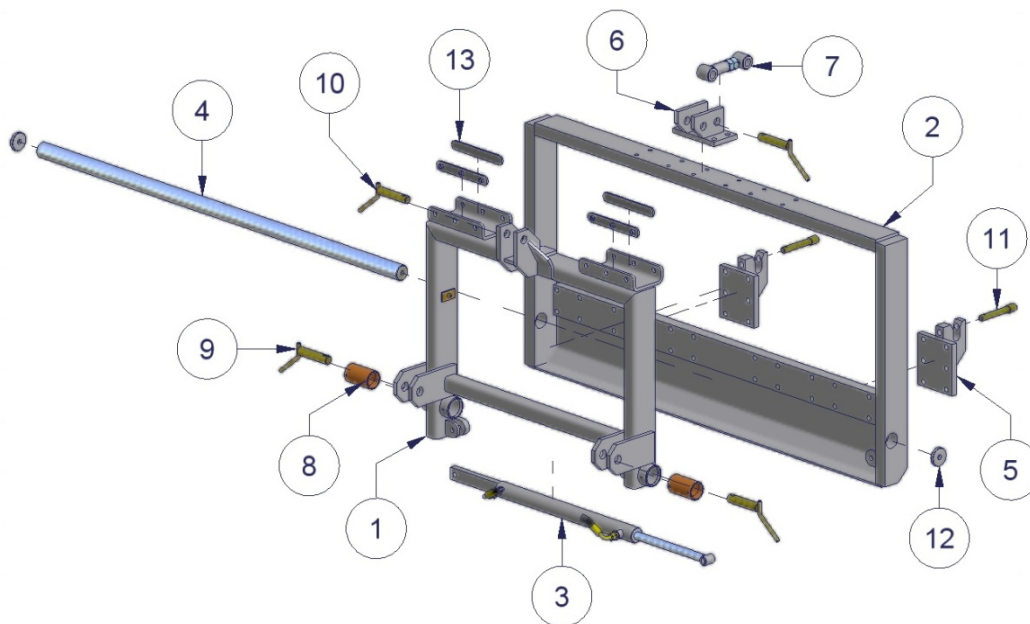
The following instructions apply to a FEM coupling:

1. Remove the clamping strips from the sideshift.
2. Remove the forks from the forklift truck or forklift mast and make sure the fork carrier is straight and clean.
3. Place the sideshift onto the fork carrier of the forklift truck or forklift mast.
4. Attach the clamping strips using two bolts M16x50. Secure these bolts tight! (140 Nm).
5. Connect the hydraulic hoses of the sideshift to the dual-action connection on the fork carrier.
Make sure the hydraulic hoses are clean to prevent any debris from entering the hydraulics of the machine.
6. Subsequently check that the hydraulic hoses can move freely and check that the system is not leaking oil.
7. Remove the locking bolt in the lowest plate of the fork carriage of the sideshift. Attach the forks to the fork carriage and mount the locking bolt.
8. Check the correct operation of the sideshift by controlling the hydraulic functions.

The WIFO HSR sideshift is now ready to be used.

2.4 DSD-500 sideshift

2.4.1 Parts list

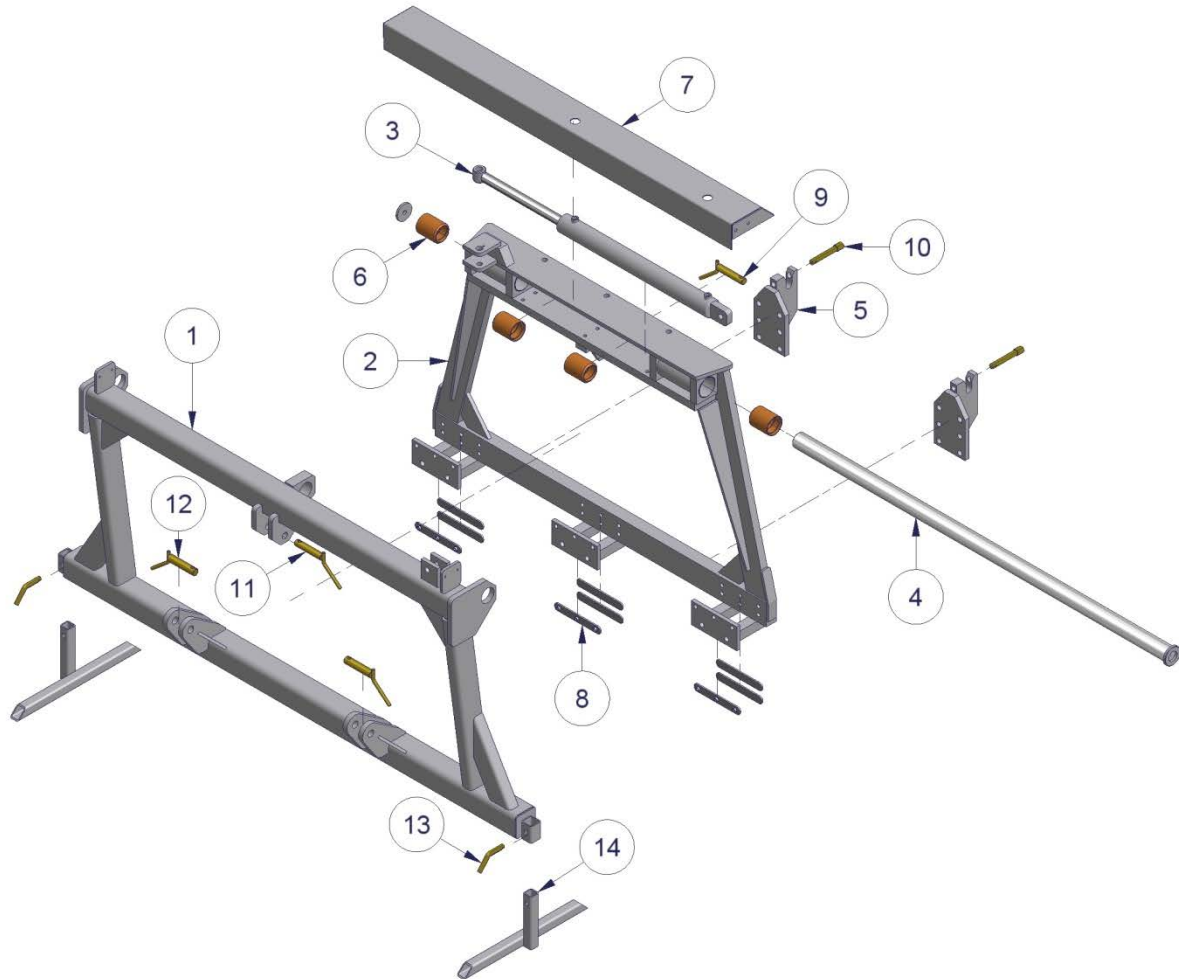


Number	Description
1	Fixed frame
2	Shiftframe
3	Shift cylinder DW 40-25-500
4	Guiding rod
5	Mounting bracket
6	Top link bracket
7	Top link
8	Bronze bearing $\varnothing 59 \times 50,5 - L100$
9	Category II carrier pin
10	Category II top pin
11	Locking pin $\varnothing 19 - L150$
12	Locking ring $\varnothing 60 \times 17 - L10$
13	Slide strip 220x30x5

Table 2.4.1-Parts list for DSD-500 sideshift

2.5 DSD-600 sideshift

2.5.1 Parts list



Number	Description
1	Fixed frame
2	Shiftframe
3	Shift cylinder DW 60-35-600
4	Guiding rod
5	Mounting bracket
6	Bronze bearing $\varnothing 75 \times 60,7$ -L90
7	Hood
8	Slide strip 220x30x5
9	Category II top pin
10	Locking pin $\varnothing 19$ -L150
11	Category II top pin
12	Category II carrier pin
13	Support leg pin
14	Support leg

Table 2.5.1-Parts list for DSD-600 sideshift

2.5.2 Commissioning the DSD-500/DSD-600 sideshift

The following instructions apply to a standard cat. II three-point hitch:

1. Make sure that the lifting arms of the three-point hitch are on the same level.
2. Attach the sideshift to the cat. II three-point hitch of the tractor. Use proper pins and locking clips.
3. Place the sideshift as horizontal as possible by adjusting the top link.
4. The lateral backlash of the sideshift in the three-point hitch should be kept to a minimum. Adjust this with the stabilizers of the three-point hitch
5. Connect the hydraulic hoses of the sideshift to the dual-action connection on the tractor.
Make sure the hydraulic hoses are clean to prevent any debris from entering the hydraulics of the machine.
6. Subsequently check that the hydraulic hoses can move freely and check that the system is not leaking oil.
7. The desired machine can now be attached to the sideshift using the mounting brackets and top link.
8. Check the correct operation of the sideshift by controlling the hydraulic functions.

The WIFO DSD sideshift is now ready to be used.

2.6 Replacement components

Type	Description	Component no.
HS-2	Slide bearing above + below (set) type CCD	409184
	Slide bearing above + below (set) type MTT	409181
HS-3	Slide bearing above + below (set) type CCD	409185
	Slide bearing above + below (set) type MTT	409182
HSR-2/HSR-3	Supply/discharge hoses shift cylinder	HYLR100031WW90
	Stripper $\varnothing 50 \times 60 \times 7/10$	4290315
DSD-500	Supply/discharge hoses shift cylinder	HYLR180031WW90
	Bronze bearing $\varnothing 59 \times 50,5 - L100$	4090193
	Stripper $\varnothing 50 \times 60 \times 7/10$	4290315
DSD-500	Supply/discharge hoses shift cylinder	HYLR180031WW90
	Bronze bearing $\varnothing 59 \times 50,5 - L100$	4090195
	Stripper $\varnothing 60 \times 70 \times 7/10$	429032

Table 2.6.1-Spare parts WIFO sideshifts

2.6.2 Various bearings for HS-2/HS-3 sideshifts

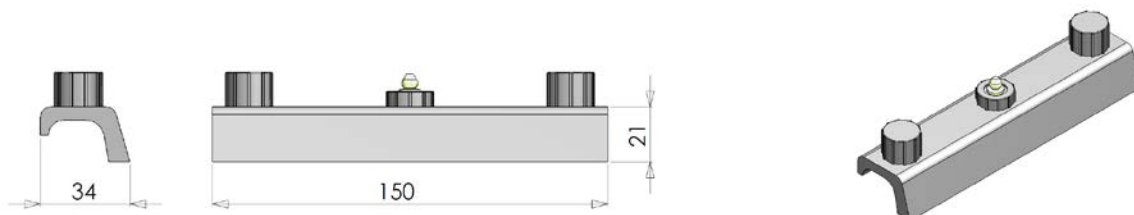


Figure 2.6.1-Slide bearing above CCD for HS-2

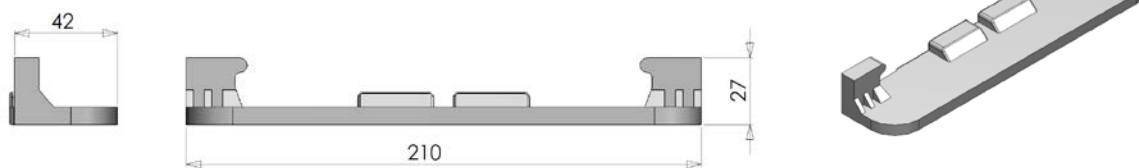


Figure 2.6.2-Slide bearing below CCD for HS-2

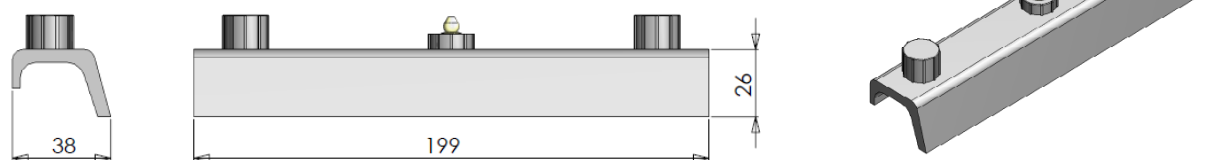


Figure 2.6.3- Slide bearing above CCD for HS-3

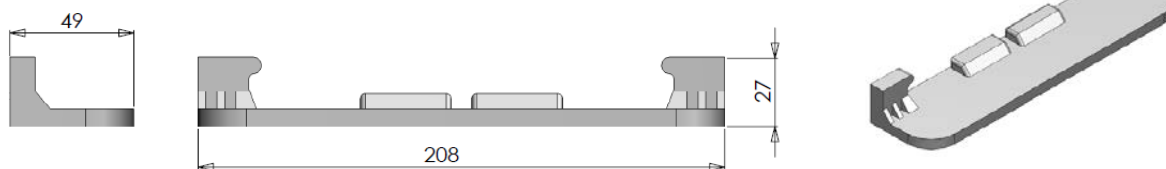


Figure 2.6.4- Slide bearing below CCD for HS-3

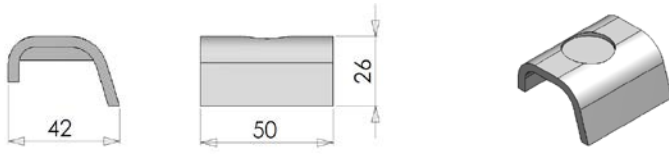


Figure 2.6.5-Slide bearing above MTT for HS-2

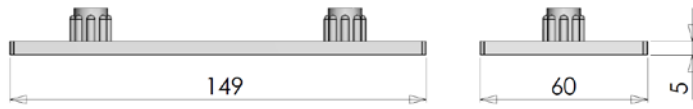


Figure 2.6.6-Slide bearing below MTT for HS-2

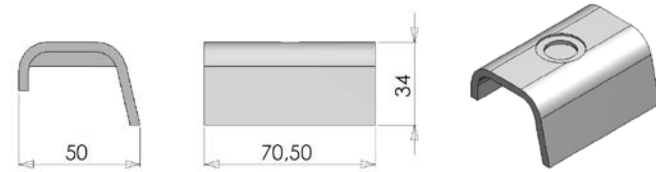
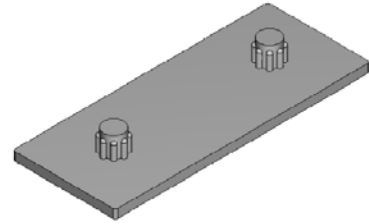


Figure 2.6.7- Slide bearing above MTT for HS-3

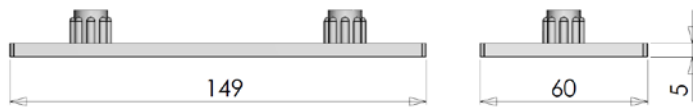
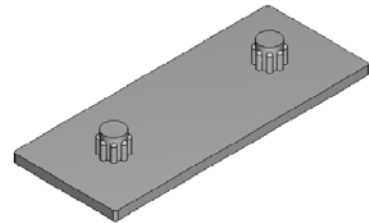

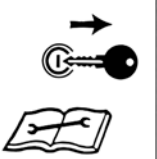


Figure 2.6.8-Slide bearing below MTT for HS-3



3. Maintenance and troubleshooting


 	<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>
---	--


The sideshift must be placed in its lowest position when maintenance or repairs are carried out. Prevent the unintended shifting of the sideshift during maintenance activities by switching off the vehicle's engine and removing the ignition key. An additional precaution would be to disconnect the hydraulic hoses.


3.1 Preventive maintenance and lubrication

After the First 8 working hours:

- Check the connections and turnbuckles of the hydraulic hoses.
- Tighten all bolts.

	<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 lithium-based grease.</i></p>
---	--

	<p><i>Regularly check the hydraulic system 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>

	<p><i>Please contact your dealer for any further concerns you may have. He will be pleased to assist.</i></p>
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EG-VERKLARING VAN OVEREENSTEMMING VOOR MACHINES
EC-DECLARATION OF CONFORMITY FOR MACHINERY
EG-MASCHINENÜBEREINSTIMMUNGSERKLÄRUNG
DÉCLARATION DE CONFORMITÉ "CE" POUR MACHINES

Fabrikant/Manufacturer/Fabrikant/Fabricant:

WIFO-Anema B.V.

Adres/Address/Adresse/Adresse:

Hegebeintumerdyk 37
9172 GP Ferwert
The Netherlands

Verklaart hiermede dat /Herwith declares that/Erklärt hiermit, daß/Déclare ci-après que

Serienummer/Serial number/Serienummer/Numéro de série:

Uitvoering/Model/Ausführung/Modèle:

- Voldoet aan de bepalingen van de Machinerichtlijn (Richtlijn 2006/42/EG, zoals laatstelijk gewijzigd) en de nationale wetgeving ter uitvoering van deze richtlijn;
- Is in conformity with the provisions of the Machine Directive (Directive 2006/43/EC, as amended) and with national implementing legislation;
- Konform ist min den einschlägigen Bestimmungen der EG-Maschinerichtlinie (EG-Richtlinie 2006/42/EG), inclusive deren Änderunge, sowie mit dem entsprechenden Rechtserlaß zur Umsetzung der Richtlinie in nationales Recht;
- Est conforme aux dispositions de la Directive "Machines" (Directive 2006/42/EC telle que dernièrement modifiée) et la législation nationale adoptée en application de ladite directive.

Ferwert, the 20.09.2009



Wytze Anema
(Director)