

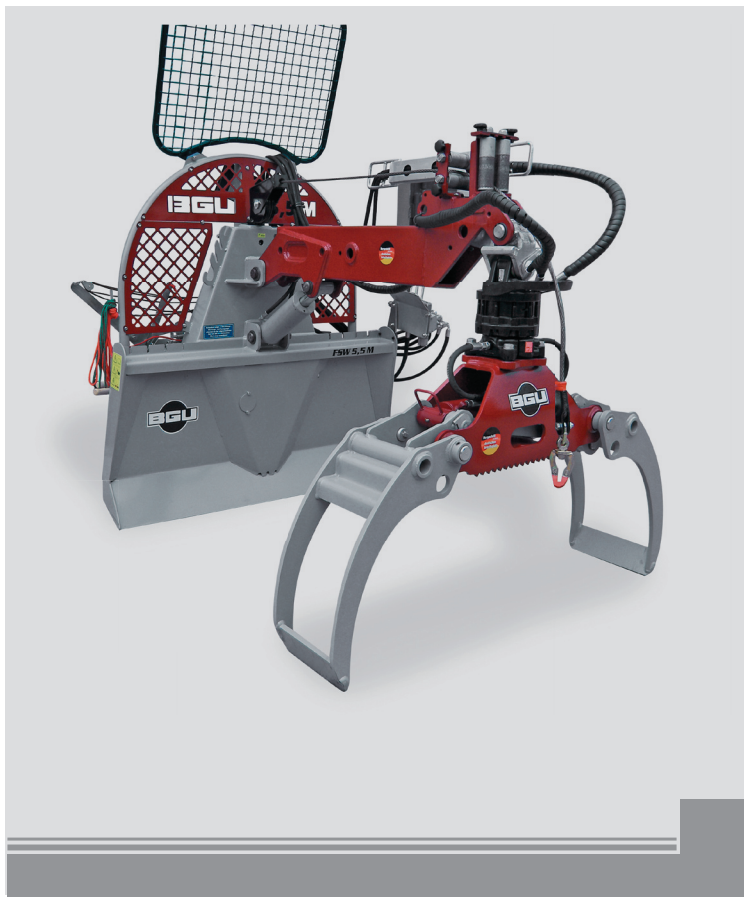
USER'S MANUAL

Carefully read these instructions before starting and using your grapples!

Start-up
Operation
Maintenance
Accessories



Logging Grapples Attachment HRZ Kombi Anbau



We manufacture in
Germany



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1. INTRODUCTION

Dear customer, thank you very much for your trust and preference in buying this loader!

1.1 About the manual

Please take time to read this manual and learn to how operate and maintain the splitter safely.

For your easier reading this manual is laid out in several sections. The sections are progressively numbered 1 through 14 and listed on the "contents" page.

The information, pictures and technical data in this document reflect current or planned product features, functions, and characteristics as of the publication date. Because of on-going product improvements and feature additions, information in this document is subject to change without notice.

If you are experiencing a problem or functional trouble on your equipment, please read the "trouble-shooting" section to identify possible causes and remedies.

When you have checked all the possible causes listed and you are still experiencing the problem, ask your Authorized Service Centre for help.

When you order parts maintenance or repair services, your Authorized Service Centre, your dealer or eventually the manufacturer need your machine serial number. These are the numbers that you have recorded on the product identification label of the manufacturer on the machine.

1.2 Delivery and transport claims

Upon delivery of the machine please check for visual machine damages such as damaged packing or scratched buckled parts. If so, make a remark on all copies of the delivery bill before signing for acceptance.

Also have the truck driver sign al copies of the delivery bill.

Also have the truck driver sign al copies of the delivery bill. Should your shipper or the truck driver refuse to accept your claim, fully reject delivery of the machine and make sure to inform us (the manufacturer) immediately. No claims will be taken into account by the shipper or by the insurance company, if a reservation note is not ma-

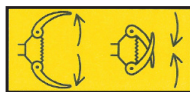
de on the delivery bill.

All transport damages must be notified within latest 2 days from delivery. Therefore delivery must be collected and inspected within this term. Later claims will be disregarded. In case of assumed but not visually clear transport damages make sure to mark the following sentence on the delivery bill: **„Reserved delivery due to assumed transportation damages.“**

Insurance and shipping companies act with extreme caution in case of transport damages and sometimes refuse to accept responsibility. Please make sure to provide clear and exhaustive evidence (photos) of the claimed damages.

Thank you in advance for your help and attention to this matter.

2. SAFETY PICTOGRAMS AND WARNING LABELS



1. Pictogram: „Grapple Release/Grasp“



2. Pictogram „Hydr. Motor“



3. Pictogram „Boom Lift UP/DOWN“



4. Machine safety label „Read the instructions before start-up“

Read, understand, and follow all instructions in this manual before starting!



5. 10. Production label „Product identification“

This label shows the company details of the manufacturer and the main machine technical data.



6. „BGU-Maschinen“ Manufacturer's logo



7. Safety pictogram „Do not infringe the dangerous zone“

Avoid standing in the dangerous zone between the tractor and the log loader.



8. Safety pictogram

„Danger Pinch Point“

Keep hands away from this danger zone till all moving parts have come to a complete stop.



9. Safety pictogram

„Caution : operating zone“

Stand clear : do not allow bystanders in the dangerous operation area while the machine is at work.



10. Safety pictogram

Max operating pressure

3. SAFETY RULES



Strictly perform installation, set-up, maintenance, cleaning and transportation with the unit switched off and all moving parts firmly secured against accidental operation. Immediately disconnect power off the machine in case of any eventual faults or troubles.

The user shall strictly comply with these operation, set-up, maintenance, repair and trouble-shooting instructions in order to assure safe operation and avoid damages to the equipment. The owner must understand these instructions and must allow only persons who understand these instructions and are familiar with the related risks to operate the loader. Moreover we recommend to let the machine be run only and strictly by trained and skilled staff who must be familiar with the applicable occupational safety and health administration rules as well as applicable transportation rules. Incorrect use of the splitter can cause serious injury or death.

No person under school leaving age (18) should operate this log splitter. Those who have reached school leaving age but are below the age of 16 may operate a log splitter if supervised by a competent person of 18 years or over. The machine shall be installed and kept in a suitable location selected by the customer for safest operation.

Make sure that the equipment stands on a safe stable foundation.

Do not allow within the hazardous zone any unauthorized third or persons who are not familiar with the dangers related to use and operation of the machine. Allow no bystanders, especially children and pets in the working area.

- Log loaders are not designed for passengers transportation.
- Strictly control/operate the log grapples from the driver's seat on the tractor.

Do not allow any thirds in the dangerous zone.

The dangerous zone includes the swivel/rotation area as well as the bucket and grapples operation (grasp/release) area.

Provide due clearance around the log/timber handling zone.

- Make sure to firmly close the clamp and park it across travel direction when at rest.
- Make sure that the grapple is hanging free so that swinging to both sides is possible during travel on uneven ground/terrain.

-
-
- When you pull/hand timber always keep in mind that lurching or other sudden, flicking movements of a suspended/pulled load may occur due to timber flexibility and bounciness. Mind for the safety of your fellow workers safety and take due measures to keep the work area free from other thirds and obstacles. Maintain safe distances from other ground workers and equipment units.
 - Perform logs piling and general rolling operations with extreme care and at very low tractor speed.

DANGER: watch for timber/branches that may fall on or enter the operator's compartment.

- Immediately repair or replace eventual faulty hydraulic components.
- Do not let hydraulic pressure hoses lay unprotected in the driver's cabin after installing and connecting the control valve unit (control slide valve / electric valve).
- Always wear suitable protective gloves when doing works on the hydraulic system. AVOID HAND CONTACT with hydraulic oil.
- BEWARE: a log grapple attached to a U-joint cannot be firmly laid down on ground. To avoid grapples from rolling over or getting tangled, make sure to secure it before laying down.
- Before replacing or servicing the grapple hanger, secure the clamp against fall-over and make sure to strictly grasp the clamp from the sides. DANGER of legs/feet injuries.
- Pinch points will occur any time when converting from fixed to mobile grapple attachment. BEWARE: injured fingers danger.
- If you are using a winch, account for a dangerous area same as at least the length of the rope. Keep this area free from bystanders and unauthorized thirds.
- A rescue/emergency kit for drivers and team safety are mandatory and must be always available in the driver's cabin.

3.1 General safety rules and occupational safety

- Before each new use, check for your tractor operational and road travel safety!
- Mind for all safety pictograms and operation labels on your grapple loader. They are all-important for safe operation and travel!
- Before starting with loading operations, familiarize with all safeties and controls on your equipment and with their functions. Do not expect to learn as you practice. Grapple loaders are heavy-duty equipment requiring preliminary training!
- Operators must wear steel toe safety shoes and snug-fitting, tear-resistant work cloths.
- Keep the front of the gate area as free as possible to avoid fire danger!
- Know where crew members are at all times! Be alert to unexpected workers or operations in the immediate working area.
- Before starting the tractor and beginning to work, make sure that there are no bystanders (especially children) in the surroundings. Be cautious of blind spots around the loader where the operator's visibility is limited!
- Sitting on the loader during work or travel can be very dangerous. Take measures to prevent it.
- Connect the equipment in compliance to these instructions and the applicable provisions!
- Never overload a machine. Carry a load that is safe, within the capacity of the machine, and suitably secured in the special fixation points on the machine!
- Always comply with the admissible axis loads and transport dimensions/clearance!
- Never leave the operator's stand during travel!
- Travel, steering and braking performance are affected by the use of hanging ballast on the machine. Always keep at safe distance for steering and braking!
- When taking turns please mind for both the outreach and/or rotating mass of the equipment!
- Make sure that all safeties and protections are duly in place and operating before starting to use your equipment!
- Strictly start log loading operations when all workers are clear of the area!
- Keep the turning/swaying area of the equipment clear from any obstacle!
- Make sure that no persons and no obstacles are within the slew range before operating any of the hydraulic folding frames.
- Before leaving the tractor, make sure to lower the grapple down on ground, switch the motor off and remove the keys from the ignition!
- Make sure that no persons stand in the dangerous zone between the tractor and the trailer unless due measures were taken to prevent the vehicle from rolling away (for example engaging the parking brakes and using additional wheel chocks for increased safe)!
- Folded frames and telescoping hoisting devices must be duly secured in the transport position!

4. OPERATION

4.1 Mandatory application field

Grapple loaders are strictly designed for wood lot owners to pull, handle and manipulate timber logs.

This grapple loader HRZ Kombi-Anbau has got front cable guide rollers and hydraulic height adjustment provisions.

Grapple loaders **HRZ Kombi-Anbau** are designed for attachment to the logging winches FSW 5,5 M and KS 5.5 H

The maximum working pressure of the grapple is 180 bar.

This unit is suitable for tractor power up to: 45/61 kW/PS

DO NOT ATTACH THE LOADER to more powerful tractors. DANGERS of even permanent loader damages.

Make sure that a suitable forestry/rescue kit is available in the driver's cabin at all times and take due measures to ensure safety of the tractor driver during all operations.

If you are attaching a winch to your equipment mind for user instructions of the winch manufacturer too.



Any other application

(i.e. handling loads off any higher level than the surface on which the tractor stands whenever the load exceeds the capacity of the tractor inbuilt hydraulics) will be considered as misuse and is therefore strictly prohibited!

Lack of compliance with these instructions may lead to dangerous risks and situations and will void the warranty. The manufacturer will not be responsible for customers' claims or resulting damages and/or injuries.

4.2 Attaching the grapple loader to an implement

- Attach the equipment to the three-point linkage of your tractor.
- Connect the hydraulic hoses of the loader to your tractor hydraulics.
- Make sure properly connect your machine to the pressure and return ports of the control valve.
- A symbol is impressed/labelled in the back/front of each joystick to show the respective corresponding loader function. (see "Safety" chapter)



Südharzer Maschinenbau GmbH will accept no liability for the state and conditions of your tractor three-point linkage. Make sure to install the loader so that no damage can occur to the driver's cab during off-road travel or with raised hydraulics.

4.3 Start-up

Operating instructions

- Perform hydraulic operations while seated in the machine: never from the ground.
- Know where crew members are at all times.
Be alert to unexpected workers or operations in the immediate dangerous/loading area.
- Do not use the grapple to handle trunks that are smaller than 8 cm in diameter unless you can bundle and lift them together.
- Check the fixation bolts and the respective cotter pins before start-up.
- Make sure to firmly close the clamp and park it across travel direction when at rest.



**Close the grapple and position it across the travel direction when travelling without a load.
DANGER! Travelling with open grapples may induce even permanent damages to your grapples.**

Use rigid or movable grapple suspensions depending on the type of timber to be handled.

- Rigid suspensions are not recommendable for hardwood that may damage the grapple or the tractor during travel under certain severe conditions.

5. HYDRAULIC SYSTEM

- DANGER: the hydraulic system operates at very high pressure!
- Mind the correct connection of all hydraulic hoses, as you perform branching of the hydraulic cylinders and of the motors!
- For due connection of the hydraulic hoses to your tractor hydraulics hydraulics make sure that no pressure is available on both the tractor and the attachment side!
- For connection of hydraulic loader functions to the tractor make sure to mark both the coupling sleeve and the relevant connector so that no accidental faulty controls can occur! Hydraulic misconnections may lead to dangerous inverted functions (i.e. raise instead of lower) and consequent risk of very severe accidents!
- Perform regular inspection of all hydraulic lines and immediately replace any defect or old tube/hose! Replacement hydraulic components must comply with the technical specifications of the original parts supplied by the manufacturer!
- Check the state of all hydraulic hoses, fittings and connectors and seal eventual leaks, if required. Do not check for leaks with your hand. Leaks can be located by passing a piece of cardboard or wood around the suspected leak and looking for discoloration.
- High-pressure fluid (oil) escaping from a very small hole can be almost invisible. Escaping fluid under pressure can have sufficient force to penetrate skin, causing serious injury or even death! In this case seek immediate doctor help! (danger of infections)
- Make sure that the machine is fully disconnected and all moving parts are secured before performing any maintenance/repair work on the machine.
- Worn-out and slacked safety chains will hang out! • (the cylinder must be filled with oil)

6. REPAIRS AND MAINTENANCE



Make sure that the machine is fully disconnected and all moving parts are secured before performing any maintenance/repair work on the machine.

Immediately disconnect power off the machine in case of any eventual fault or trouble.

Before performing any maintenance/repair work on the machine, make sure that the grapples are open wide and securely set on ground with the machine fully disconnected and all moving parts stopped and secured.



DANGER : a loader with the grapple pivotally connected to a universal U-joint (pivot) will stand at tilt-over risk unless it is firmly supported and secured against collapsing.

- Provide immediate replacement of defective hydraulic lines and couplings or other hydraulic components.
- Rust, dirt and crop debris must be cleaned frequently to allow the piston rod of both the grapple cylinder and the slewing cylinder to operate trouble-free.
- Keep the log fork and the grapples tines clean.
- Check for proper conditions of the electric system
- Replace eventually damaged, missing or unreadable labels
- Check for trouble-free operation of the pulleys and replace bearing if required

6.1 Services to be provided at 10 hour operation intervals

- Lubricate all moving parts by means of the respective nipple head
- Recommended lubricant: universal lub grease
- Check the conditions of all hydraulic couplings and hoses
- Tightening all screwed/bolted joints, checking and replacing eventual missing hardware.

7. HANDLING AND TRANSPORTATION

A switched-off loader stands at instability risk as the grapple keeps hanging pivotally on the universal joint.

Always secure the loader against tipping over, folding up and/or collapsing.



Make sure to close the grapple and set it across travel direction prior to rolling without a load. DANGER: failure to comply with this instruction may lead to grapple damages!

8. ACCESSORIES

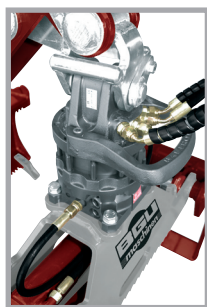


Fig. 1

Rotator

(replacement rotators are supplied with connection hoses)

1400 Nm, 4.5t at 195 bar, Flange 140x140, 4x M16x50 (Fig. 1)

Part No. 96255 (25 kg)

Rotator

(replacement rotators are supplied with connection hoses)

1200 Nm, 4.5t at 230 bar, Flange 140x140, 4x M16x50

Part No. 96255 (22 kg)

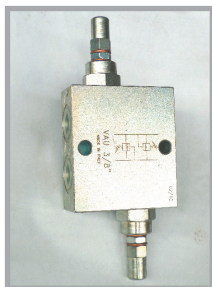


Fig. 2

Directional sliding valve (overload safety)

Part no. 96273

Mandatory for use of top-swivelling grapples

(Fig. 2)

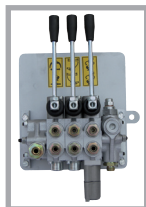


Fig. 3

Hydraulic control valve

Single Joystick, sectional construction type (3 sections) fig. 3,

Part No.96262

**Accessories are not supplied on standard machine versions but they can be retrofitted and bought extra.*

9. TECHNICAL SPECIFICATIONS

Technical Specifications	Unit of measurement	Part No. 96247
Attaches to any logging winch		
Tractor power requirements	kW/PS	from 45/61
Grapples HG 1300 (included)		
Gripping capacity (opening width)	mm	90-1280
Clamping force	t	9.5
Pivotal hanger for grapple rotation		160°
Cardan joint fixation		
Weight	kg	522
Optional rotator	Nm	1400
	t	4.5 at 195 bar
Weight	kg	25
Optional rotator	Nm	1200
	t	4.5 at 230 bar
Weight	kg	22

10. DISABLING AND DISPOSAL

When the machine is fully obsolete and cannot be of any longer use, it should be duly dismantled ahead of discarding. Certain components need deactivation and dismantling in order to assure that no further use is made by other parties and that no worn out parts are recycled for other applications.

During dismantle be alert for possible recyclable materials and components that belong to differentiated waste collection procedures applicable in your country. During dismantle be alert for possible recyclable materials and components that belong to differentiated waste collection procedures applicable in your country.

The manufacturer is not liable and undertakes no responsibility for personal injuries or damages that may result from the recycling of worn out machine parts and eventual re-use in other applications different than originally stated in this manual.

Dismantling procedure:

Take good note please: each and every dismantling task must be performed by authorized service centres or trained skilled staff only!

- Lock and clamp all moving machine parts and pull the machine down into single components
- Deliver each single component only to authorized waste management facilities
- Remove rubber and plastic parts from the machine that must be separately disposed of

Deactivated, clamped moving/driving parts and components are of no further risk and danger.

11. OTHER AREAS OF POSSIBLE DANGER

11.1 Mechanical dangers

Possible dangers related to machine moving parts are minimized by means of suitable safeties and protections that cannot be dismantled unless special tools and equipment are used.

DANGER: removing or by-passing inbuilt machine safeties may result into serious operator's personal injuries.

12. LEGAL WARRANTY

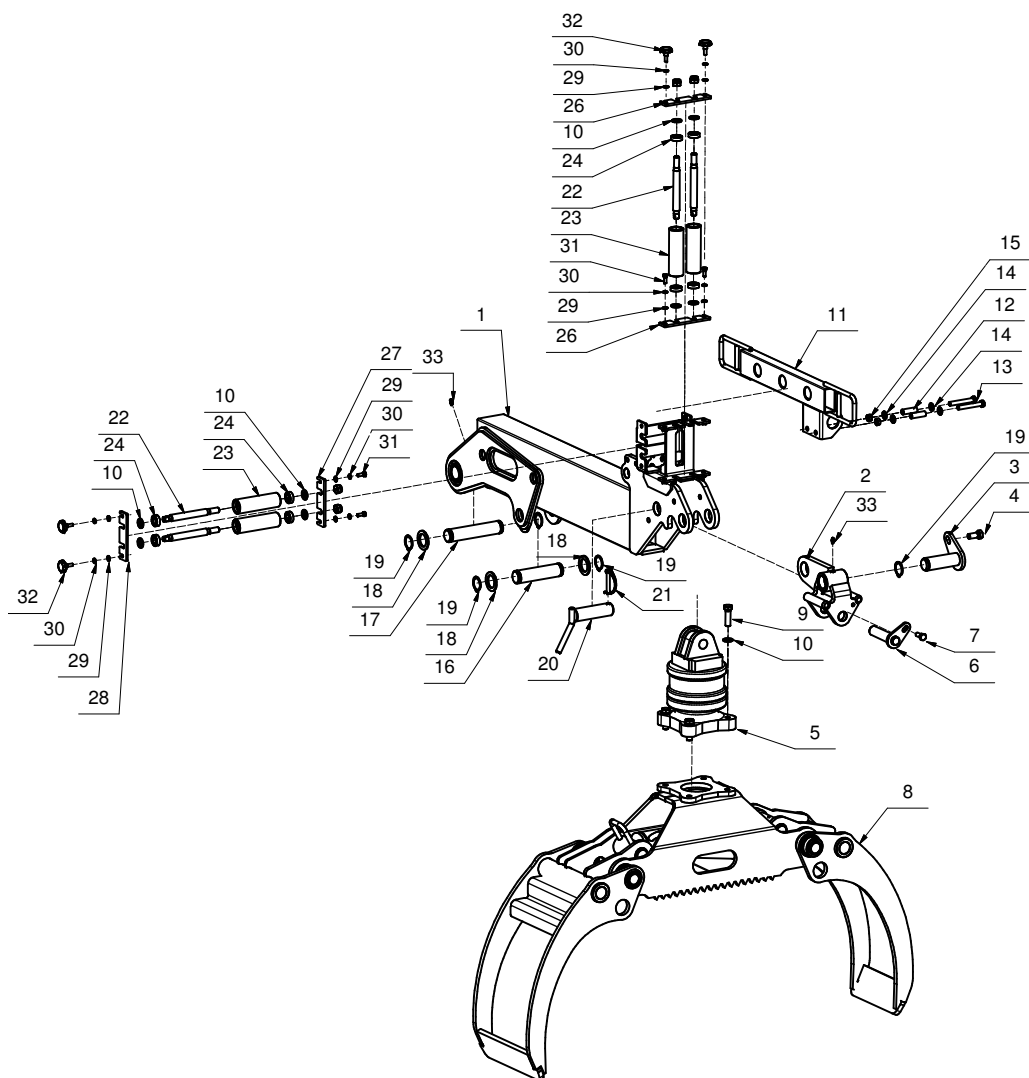
All BGU machines are covered with warranty terms in accordance with the law.

Customers should promptly notify the manufacturer eventual material or production claims on their detection. While asking for warranty service, customer should show copy of their purchase invoice or receipt. The warranty does not cover for faults due to natural wear, temperature or weather agents as well as misuse, faulty installation or set-up, improper operations and lubrication or act of vandalism. No warranty will be given on parts damaged by improper handling, use and application.

The manufacturer is further not responsible for warranty service on machines used for other applications as mentioned in this manual, altered or modified by the customer or other thirds, or overloaded.

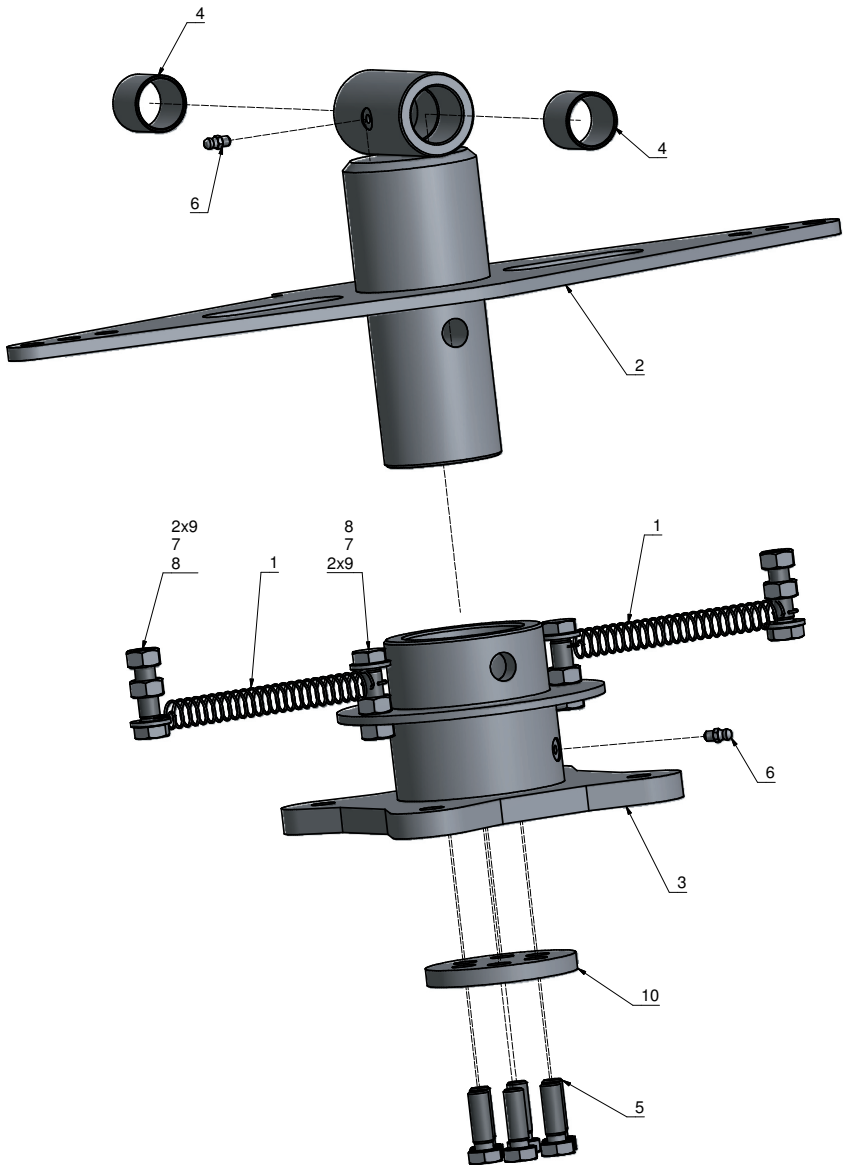
No warranty applies to consumable parts (for instance: V-belts, blades, tools, and other implements) and to adjustment/calibration works.

13. SPARE PARTS FOR HRZ KOMBI-ANBAU



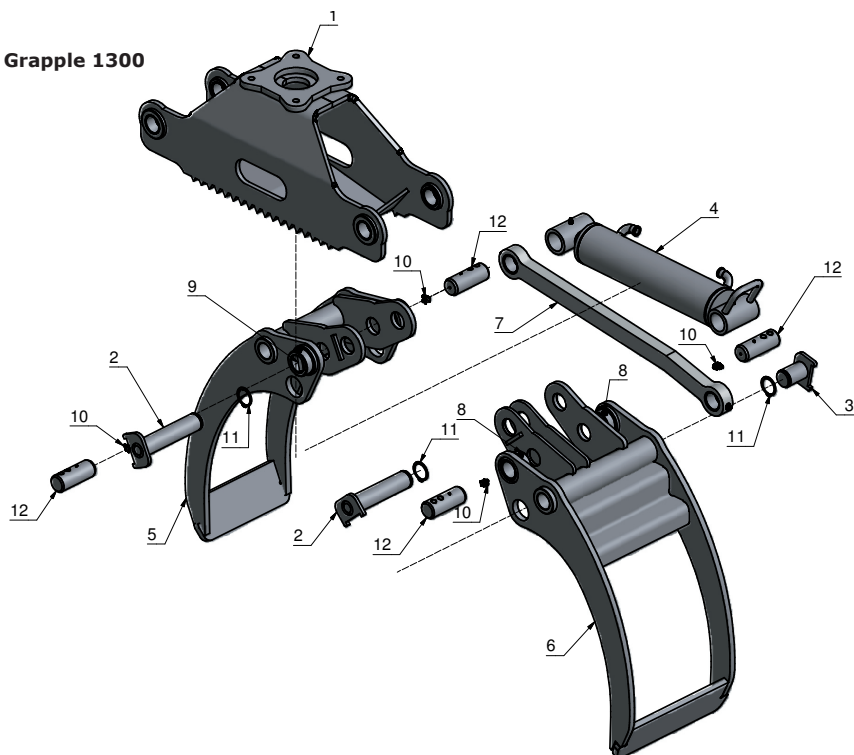
Pos.	Description HRZ Kombi-Anbau	Part No.	DIN	Dimensions
1	Swivelling extendible arm	25499		
2	Joint assembly	22333		
3	Standard bolts, 40-120	22835		
4	Hex screw	55923	933	M16x35
5	Rotator	56023		
6	Standard bolts, 30-123	22829		
7	Hex screw	51478	933	M12x30
8	Grapple 1300	23842		
9	Hex screw	55931	933	M16x55
10	Shim	51652	125	17
11	Cable guide HRZ Fix-AS	22268		
12	Spacer	25505		
13	Hex screw	54435	931-1	M12x85
14	Shim	51650	125	13
15	Hex nut	51595	934	M12
16	Pivot pin	25506		
17	Retaining bolt	25507		
18	Spacing washer	25508		
19	Shaft locking ring	51676	471	40x1,75
20	Top link pin for Cat. 2	55991		
21	Linch pin bolt	55913		
22	Stud	25503		
23	Roller	25504		
24	SKF grooved ball bearing, single raw, 2-sided, shielded	52174	625	SKF-SKF6003-2Z
25	Hex nut	51611	985	M16
26	Roller cover 1	25500		
27	Roller cover 2	25501		
28	Roller cover 3	25502		
29	Shim	51648	125	8.4
30	Spring washer	51706	127	8
31	Hex screw	51445	933	M8x22
32	Star-knob	53124		M8x20
33	Cone lubricating nipples - A-shape	51164	71412	

Grapple pivotal hanger, complete assembly



Pos.	Description, grapple pivotal hanger, complete assembly (Part No. 22387)	Nr.	DIN	Dimensions
1	Tension spring	55803		
2	Shaft bushing	22379		
3	Grapple connection	22383		
4	Plain bearing, collar-less	55910		
5	Hex screw	51479	933	M12x35
6	Ball lubricator	51163		AM 6x1
7	Washer	51650	125	13
8	Hex screw	51481	933	M12x45
9	Hex nut	51595	934	M12
10	Perforated T-plate	22385		

Grapple 1300



Pos.	Description Grapple 1300 (Part no. 23842)	No.	DIN	Dimensions
1	Housing for grapple 1300	24034		
2	Special bolt 40-178	22355		
3	Special bolt 40-60	22356		
4	Hydraulic cylinder	55938		80-40-510-800-290
5	Small grapple	23851		
6	Large grapple	23846		
7	Parallel guide	24035		
8	Ball lubricator	51163		AM 6x1
9	Heavy duty pin	55936		12x60
10	Taper lubricator	55937		
11	Shaft locking ring	51676	471	40
12	Shaft 40-125	22351		

14. EC STATEMENT OF COMPLIANCE

to EC Machines Directive No. 42/2006 and EMV (Electromagnetic compatibility) Directive 108/2004

We hereby declare that the equipment described in this manual responds in full to the actual version brought on the market. We, the manufacturer further declare that this equipment was duly designed and manufactured in accordance with the actual European Safety and Health Standards settled by the relevant EEC directives as well as the latest electromagnetic standards issued by the European Council of 3.5.89 and later enforced by all member states.

This statement of compliance does not apply to customer modifications of the equipment without manufacturer's written approval.

Machine type:	Grapple loader
Models:	HRZ Kombi-Anbau
Production number:	see Manufacturer's identification plate
Applicable European Standards:	EC Directive 42/2006
Other applicable Standards:	Full compliance to the European safety rules was assured by enforcement of the following harmonised Standards: EN 292-1/EN 292-2 prEN 1553-1 May 1997 for farming attachments EN ISO 3767-4 for devices with inbuilt control valve.

Person responsible for the technical documents: Jörg Kernstock (Management)

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Date 13.02.2013

Translation of the original user's manual in German



Jörg Kernstock (Management)

(customer's copy)



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