

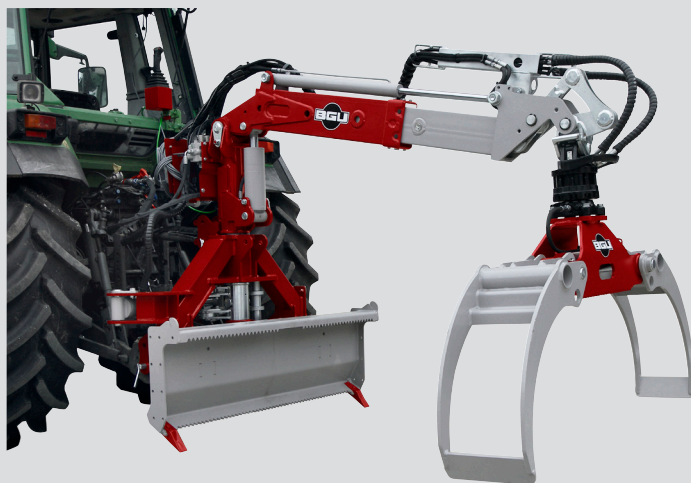
USER'S MANUAL

Carefully read these instructions before starting and using your loader!

Set-up & installation
Use
Maintenance
Accessories



Grapple loader HRZ Loader



We manufacture
in Germany!



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1. GENERAL INFORMATION

Dear customer, thank you very much for your trust and preference in choosing our equipment and joining the number of our best customers in the world. We are confident that our equipment will be up to all your expectations and ensure you a long lasting quality and performance.

1.1 About this manual

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

For your easier reading, this manual is laid out in several sections. The sections are progressively numbered and listed on the "content" 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 improvement 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 for maintenance or repair services, your Authorized Service Centre, your dealer or eventually the manufacturer need your machine serial number and engine 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 broken packing or scratched buckled parts. If so, make a remark on **all** copies of the delivery bill (including the one for your own use) before signing for acceptance.

The shipper/driver have to mandatorily countersign and accept your remarks.

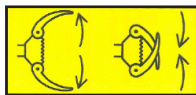
Should your shipper or the truck driver refuse to accept your claim and countersign the delivery bill, fully reject delivery and make sure to inform us (the manufacturer) immediately. No claims shall be taken into account by the shipper or by the insurance company, if a reservation note is not made on 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 shall 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 understanding in this matter.

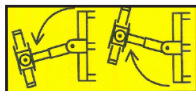
2. SAFETY PICTOGRAMS AND WARNING



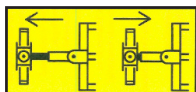
1. Pictogram: „Grapple Release/Grasp“



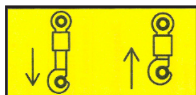
2. Pictogram „Hydr. Motor“



3. Pictogram „Slewing arm to the right/left“



4. Pictogram „Extendible Arm, Retract/Extend“



5. Pictogram „Retract/Extend Top Link-Pin“



6. Pictogram „Pivotal Hanger UP/DOWN“



7. Pictogram „Boom Lift UP/DOWN“



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

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



9. Identification label „Product identification“

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



10. „BGU-Maschinen“ Manufacturer's Logo



11. Safety pictogram

„Do not infringe the dangerous zone“

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



12. Safety pictogram

„Danger Pinch Point“

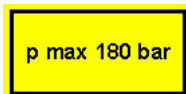
Keep hands away from this danger zone till all moving parts have come to a complete stop.



13. Safety pictogram

„Caution: operating zone“

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



14. Safety pictogram

„max. operating pressure“

3. SAFETY



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

The user shall strictly comply with these operation, set-up, maintenance, repair and trouble-shooting instructions in order to assure safe operation and no damages to the equipment. Moreover, we recommend to let the machine be run and maintained 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 saw can cause serious injury or death.

No person under school leaving age should operate a log loader. Those who have reached school leaving age but are below the age of 18 may operate a log loader 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 or travelling without load.
- Make sure that the grapple is hanging free so that slewing to both sides is possible during travel on uneven ground/terrain.
- When you pull/handle 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 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.
- Changing the length setting of the extendible arm may be strictly performed with the backhoe lowered on ground, the grapple clamped and the tractor engine switched off. Also make sure to disconnect the hydraulic system and protect it against accidental restart.
- When travelling across a slope or turning around a bend with a suspended load, always maintain a low gear to avoid any danger to the tractor in the event of possible skidding, jamming or canting of a log and consequent dangerous rollover.
- Immediately repair or replace eventual faulty hydraulic components.
- Do not let hydraulic pressure hoses lay unprotected in the driver's cabine 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 the grapple 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 fallover 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 doths.
- Keep the equipment as free as possible of accumulated limbs and debris, to avoid any fire danger!
- Know where crew members are at all times. Be alert to unexpected workers or operations in the immediate skidding area. Before starting the tractor and beginning to work, make sure that there are no bystanders (especially child ren) in the surroundings. Be cautious of blind spots around the loader where the operator's visibility is limited!
- Do not allow anybody on the loader during loading or travel operations!!

-
-
- Connect the equipment in compliance with these instructions and the applicable provisions!
 - Work defensively. Think ahead and anticipate hazards. Take special care in connecting/disconnecting eventual attachments to/from the tractor!
 - Always have the unit firmly stand on the special outriggers when performing mounting/dismounting works on the machine! (safety and stability)
 - 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!
 - Provide and check the functionality of all transport facilities as for instance illumination, warning tools and devices, safeties and protections!
 - The disconnectors of the quick-action couplings must hang loose. Avoid self-disconnection in the lower section!
 - 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/slewing 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.
 - BEWARE of pinch hands danger on all moving parts (for instance hydraulic attachments)!
 - Always keep at safe distance from any manually folding/flapping attachments!
 - Before leaving the tractor, make sure to lower the grapple down on ground, switch the engine 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 woodlot owners to pull, handle and manipulate timber logs. They are purposely designed with attachment lugs to allow for very practical pulling operations by means of logging chains. The maximum working pressure of the grapple is 180 bar.

This loader is available in the following versions: **HRZ LADER** for rear attachment to a 3-point linkage Cat. 2

Suitable for tractor power: 40-90 kW
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!

**Misuse will completely void your warranty.
The manufacturer accepts no liability for personal injuries and damages to other equipment caused by misusing the machine.**

4.2 Preliminary controls before use

4.2.1 Attaching the loader to the tractor

- Attach the equipment to the three-point linkage of your tractor using the 25 mm pins and cotters supplied by the manufacturer with the loader.
- Connect the hydraulic hoses of the loader to your tractor hydraulics.
- Provide for best linkage to your tractor making use of the most convenient hitching points out of the ones available on the loader.
- Use your tractor hydraulics to pull and then gradually lift the loader up. When lifting from the front the lift boom will go so far down so that the cab might get damaged. Risk of getting jammed! Work with extreme caution.
- Install the extendible arm acting in strict compliance to ➡ (see safety tips)

- Perform a functional control of the hydraulics and make sure that the functions of the grapple correspond to the control symbols and connect the hoses accordingly.



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 lifted hydraulics.

4.2.2 Installing an additional control valve unit

As soon as a hydraulic function is no longer required, you can use it to control operation of the hydraulic top link-pin.

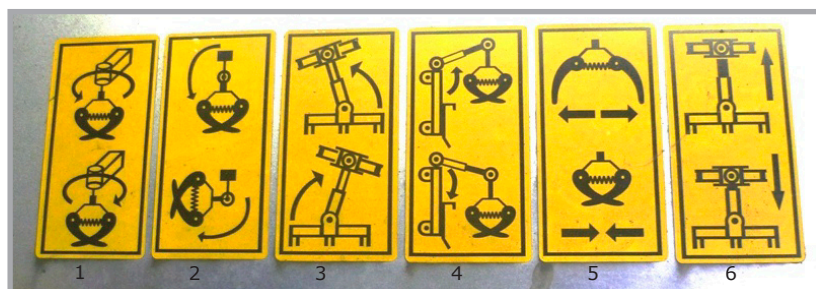
Hand control valve

- Install on a convenient mount inside the tractor cab
- Properly connect all hoses. **WARNING:** an inverted flow direction will lead to control valve failure
- Never remove the check valve from the drain line
- Impress all operating symbols

Symbols – Hand control valve (Fig. 1)

A symbol is impressed/labelled in the back/front of each joystick to show the respective corresponding loader functions. (see point 2 of the safety instructions)

Fig. 1



- | | |
|----------------------------|-------------------|
| 1 Rotator | left/right (360°) |
| 2 Top slewing arrangement | UP/DOWN |
| 3 Slewing | to the left/right |
| 4 Boom lift, sliding stage | UP/DOWN |
| 5 Grapple | open/close |
| 6 Extendible arm | Retract/extend |

Operating instructions

- Perform hydraulic operations while seated in the machine: never from the ground.
- **Always set the top grapples and the rotator on the float position of the control valve before starting to winch heavy trunks.**
- 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.
- To assure trouble-free braking and steering of the loader travelling with a suspended load, at least 20% of the vehicle own weight shall still be arranged on the on the front axle. The exact amount of ballast weight that one can use, must be obtained from your tractor supplier.
- Travel performance much depends on the ground/road conditions and the attachments to our equipment. Always drive cautiously and defensively minding for your route at all times.
- When not in operation, always lower the boom and rest the grapple on the ground.
- Check the fixation bolts and the respective cotter pins before start-up.
- Close the grapple and set it across travel direction before operating the unit without a load (unloaded state).



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 loader or the tractor during travel under certain severe conditions.

Eventually use a top slewing arrangement if required by the working conditions on your site.

- Top slewing arrangements should be used every time when handling of huge timber or entire trees comes into question. In this special operation mode, the weight of the transported load is a crucial feature and should be given extremely accurate consideration.
- If you are winching heavy trunks, be sure that the floating mode is elected on the control valve block for the rotator and top slewing system.

4.3.1 Start-up Joystick (optional)



Before starting-up, dismount the brackets with the joystick and the control valve and place them in the driver's cabin of the tractor.

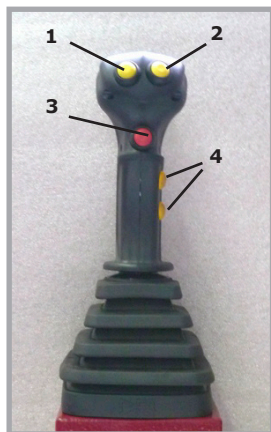


Fig. 2

Operator's side: (Fig. 2)

Joystick operation North:	„DOWN“
Joystick operation South:	„UP“
Joystick operation East:	„Slewing gear/ left“
Joystick operation West:	„Slewing gear/ right“

- 1 = (yellow) Rotator, floating position, on/off
- 2 = (yellow) Top slewing, floating position on/off
- 3 = (red) Grapple /open
- 4 = (yellow) for grapple top-slewing only

The rotator controls are deactivated when the floating position is („on“), and the top-slewing arrangement is in the floating position!



Fig. 3

Rear side: (Fig. 3)

- 1 = (red) Extendible arm, extended
- 2 = (red) Extendible arm, retracted
- 3 = (yellow) Grapple closed
- 4 = Rocker switch left/right



For storage and parking of the machine outdoor make sure to protect the Joystick lever against weathering agents.

4.3.2 Start-up proportional controls

The proportional controls are operated with the Joystick.

Fig. 4



- 1 Pivotal hanger
- 2 Boom lift
- 4 Extendible arm (extend)
- 6 Grapple
- 7 Activate the rotator
- 8 Activate the top-slewing arrangement

4.4 Attachments

- Before mounting and dismounting any attachment to/off the three-point hitch, adjust the related operating controls so to avoid any accidental raising/lowering.
- Make sure to attach the loader to a tractor of required power and hitching specifications!
- Typical injuries resulting from getting caught in a three-point-hitch are amputations, lacerations and pinch hands. Account the 3-point hitch a dangerous area and move cautiously around it!
- Never stand between the tractor and the loader when using three-point linkage external operation!!
- While setting the equipment in its transport position always provide for sufficient side detent of the three point hitch!
- While travelling on road with the raised loader, always secure the control levers against accidental shifting down and make sure to disconnect power from the machine!

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 motors!
- For due connection of the hydraulic hoses to your tractor 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 dangerously inverted functions (i.e. lifting instead of lowering) 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. In the event of any malfunctioning, switch the machine off before trouble-shooting.

- Periodically check the tightness of all nuts and screws and retighten them if necessary!
- When you perform maintenance works with the implement lifted up make sure to efficiently secure it against accidental dropping!
- When changing or replacing any part of the machine make sure to use appropriate tools and work gloves!
- Do not spill oil in the environment. Oils, grease and filters must be disposed in accordance with applicable rules and regulations!
- When performing electric weldings on the tractor and/or eventual attachments, make sure to first perform power disconnection from both the generator and the battery!
- Strictly use original spare parts or parts with equivalent specifications as the original manufacturer's ones!



Completely open the grapples tines and lower the grapple on ground. Disconnect the tractor (or other towing vehicle) before starting any repair or maintenance work. Beware: a loader with the grapple pivotally connected to a universal joint (pivot) will stand at tilt-over risk unless it is firmly supported and secured against collapsing.

The following services must be provided at 10 hour operation intervals:

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

Monitoring procedures during work:

- 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.
- Replace any damaged, unreadable or missing label on the machine.

7. ACCESSORIES

NEW : *Earth Auger : can be retrofitted on the* grapple loader

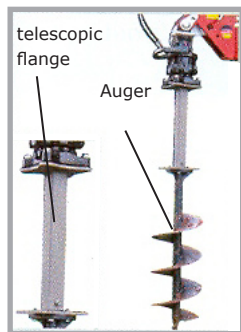


Fig. 1

Optional* earth augers can be equipped with additional augers available in three sizes (Fig. 1)

Ø 200 mm **Code 96322**

Ø 300 mm **Code 96323**

Ø 500 mm **Code 96324**



Fig. 3

Rotator

(replacement kit complete with hoses)

1400 Nm, 4.5t for **195 bar**, Flange 140x140, 4x M16x50 (Fig. 3)
Code 96255

Rotator

1200 Nm, 4.5 t for **230 bar**, Flange 140x140 4x16,
Code 96278

**Accessories are not available on standard machine versions but can be bought extra.*

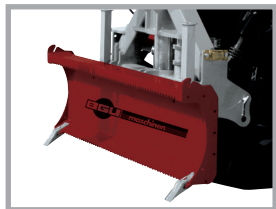


Fig. 4

Backhoe

with 2 excavation teeth, Length=1500 mm

Code 96256

(Fig. 4)



Fig. 5

Top link-pin for the backhoe

Code 96257

Required for use of the backhoe without grapples

(Fig. 5)



Fig. 7

Hydraulic grapples - Top-slewing arrangement

Code 96260

180° - Slewing range (Fig. 7)

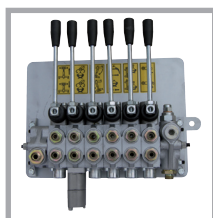


Fig. 8

Hydraulic Control valve

Code 96263 4-sections

Code 96264 5-sections

Code 96268 6-sections

Single-lever, sectional construction (Fig. 8)

NEW:

**Professional Hightech Proportional Control VALVE
Code 95252**

Sectional control block for HRZ Loaders, with 3x Proportional and 3x S-W, 1x floating position), completely pre-assembled units ready for use, with *universal Joystick-control lever*, it requires 12V power supply (control block installed on the machine). (Fig. 9)

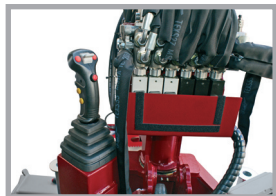


Fig. 9



Fig. 10

**Clip-in bracket
Code 96269**

Suitable for valve installation for all control valve models. (Fig. 10)



Fig. 11

**Wheel axle to be bolted on the bucket
Code 96251**

composed of 2 wheeled axles seatings, wheel gauge: 2200 mm and 260/70 - 15.3" tires (Fig. 11)

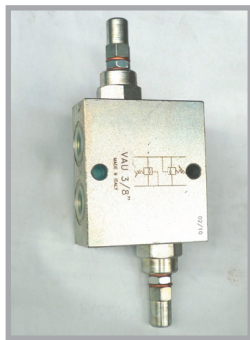


Fig. 12

**Float valve (overload safety)
Code 96273**

for grapple top-slewing and 180° slewing arrangement. To be **ONLY** used when the machine is powered directly from tractor hydraulics and therefore has no builtin hydraulic control valve. (Fig. 12)

**Coupling for hydraulic top link pin
Code 96259**

(Set of hoses with quick couplings)

8. TRANSPORT AND HANDLING

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!

9. DISMOUNTING AND DISCARDING AN OBSOLETE MACHINE

When a machine is fully obsolete and cannot be of use any longer, 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.

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 reuse 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!

- Pull the machine down into single components.
- Deliver each single component only to authorized waste management facilities.
- Drain oil and fuel out of respective tanks and lines before disposal of the machine.
- 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.

10. TECHNICAL SPECIFICATIONS

Technical specifications	Unit of measur.	Code No. 96255	Code no. 96278
Rear-mounts to any Cat II tractor from 40-90 kW			
Tractor power requirements	KW	40 90 kW	
Grapple model HG 1700 included			
Max gripping width	mm	90-1680	
Clamping force	t	9,5	
Rotator optional	Nm	1400	1200
	t	4.5 at 195 bar	4.5 at 230 bar
Weight	kg	25	22
Weight without optional accessories	kg	about 395	
Transport dimensions:			
Width	mm	about 1200	
Width with bucket	mm	1500	
Height	mm	about 1300	

11. OTHER AREAS OF POSSIBLE HAZARD

11.1 Mechanical dangers

Possible dangers related to machine moving parts are minimized by means of suitable safeties and protections that cannot be removed unless special tools and equipment are used. Do not attempt to remove or by-pass any of the machine inbuilt safeties.

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

Make sure to keep bystanders away from the dangerous area and specifically from the grapple during operation.

12. WARRANTY

All our 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 operation and lubrication or acts 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 than mentioned in this manual, altered or modified by the customer or other thirds, or overloaded. Never attempt to use an incomplete machine or one fitted with unauthorized modifications. Any modifications to your machine can cause personal injuries, and will void your warranty.

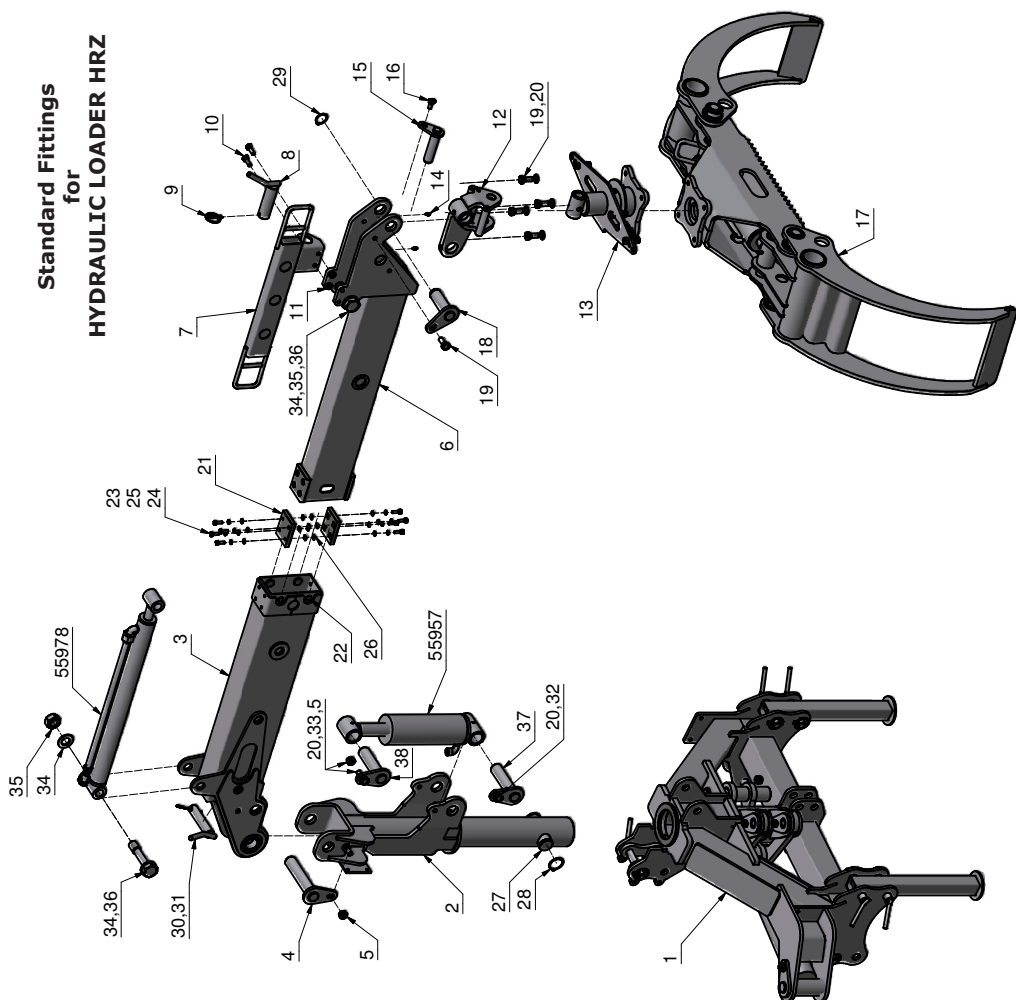
Consumable parts with a prescribed life (i.e. pulleys, tools, blades and various auxiliary materials) are excluded from the warranty as well as adjustment, optimization and fine-setting or retrofitting works.

13. SPARE PART LIST

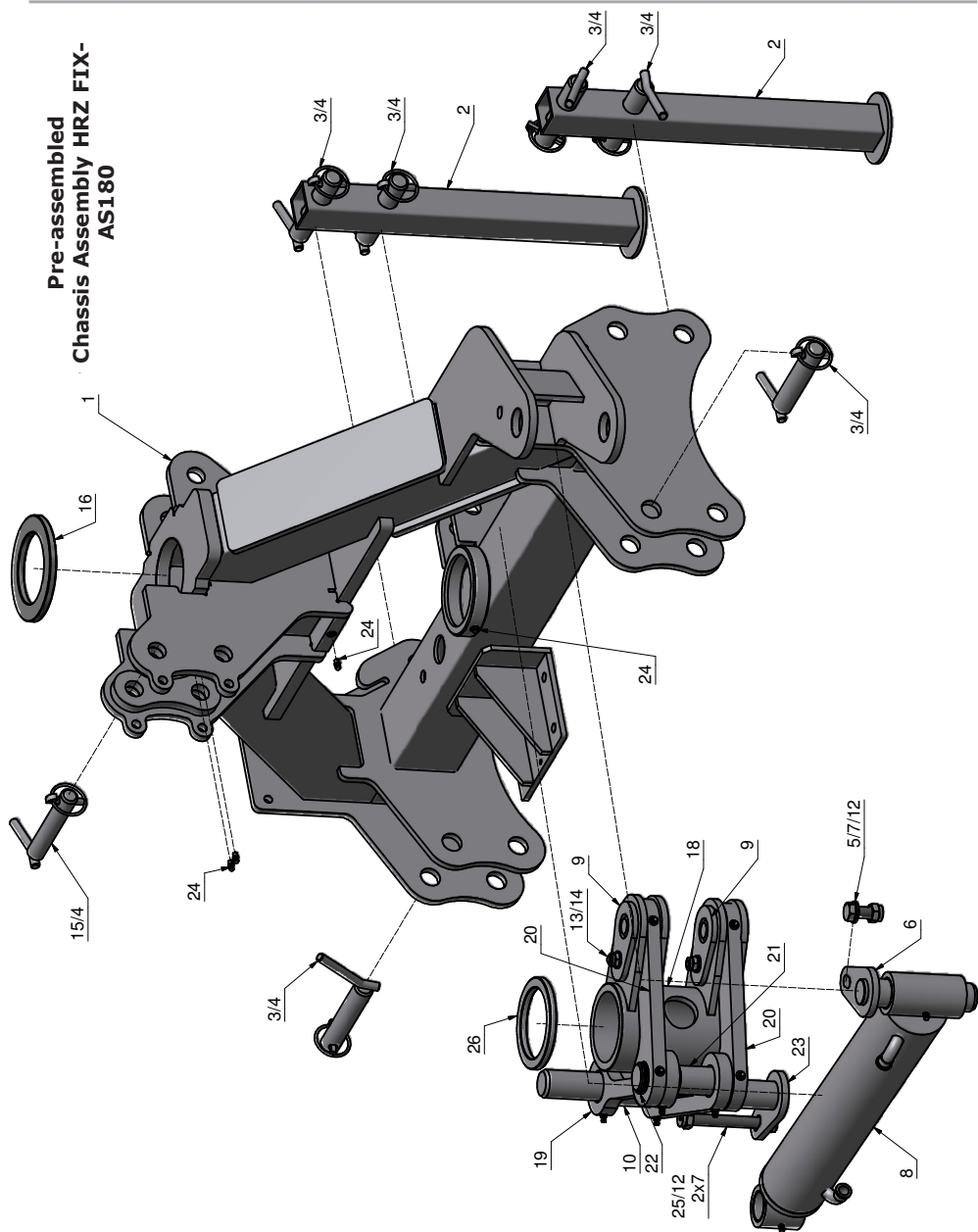
Pos.	Description	Code no.	DIN	Dimensions
1	Chassis assembly	24526		
2	HRZ Loader, mount assembly	22227		
3	HRZ loader, extendible arm, main	22210		
4	Standard bolts, 40-195	22854		
5	Self-locking hex nut	51611	DIN 985	M16
6	Preassembled inner stage 600	24525		
7	Hose guide, complete assembly	22268		
8	Top link pin for Cat. 2	55991		
9	Cotter pin	55912		
10	Hex screw	51479	DIN 933	M 12x35
11	Self-locking hex nut	51609	DIN 985	M 12
12	Joint assembly	22333		
13	Grapple pivotal hanger	22387		
14	Ball lubricator	51163		AM 6x1
15	Standard bolts, 30-123	22829		
16	Hex screw	51477	DIN 933	M 12x25
17	Grapple 1700, complete assembly	22349		
18	Standard bolts, 40-120	22835		
19	Hex screw	55923	DIN 933	M 16x35
20	Washer	51652	DIN 125	17
21	Flat sliding pad	55879		
22	Round sliding pad	55880		
23	Hex screw	51446	DIN 933	M 8x25
24	Washer	51648	DIN 125	8,4
25	Spring washer	51706	DIN 127	B 8
26	Square nut	56153	DIN 562	M 8
27	Seeger ring bolts, 50-150	22844		
28	Shaft retaining ring	55959	DIN 471	50x2
29	Shaft retaining ring	51676	DIN 471	40
30	Top link pin	55933		32x150
31	Linch pin bolt (motor)	55913		10 mm
32	Hex screw	51489	933	M16x30
33	Hex screw	52652	933	M16x45
34	Washer	55962	125	31
35	Hex nut	52541	934	M30

Standard Fittings for HYDRAULIC LOADER HRZ

Pos.	Description (HRZ Loader)	Code no.	DIN	Dimensions
36	Hex screw with shank	56083	931	M30x140
37	Standard bolts 40-155	22851		
38	Standard bolts 40-146	22852		
39	Threadlocker (medium)	53118		
40	Standard fittings for Hydraulic Loader HRZ	24324		

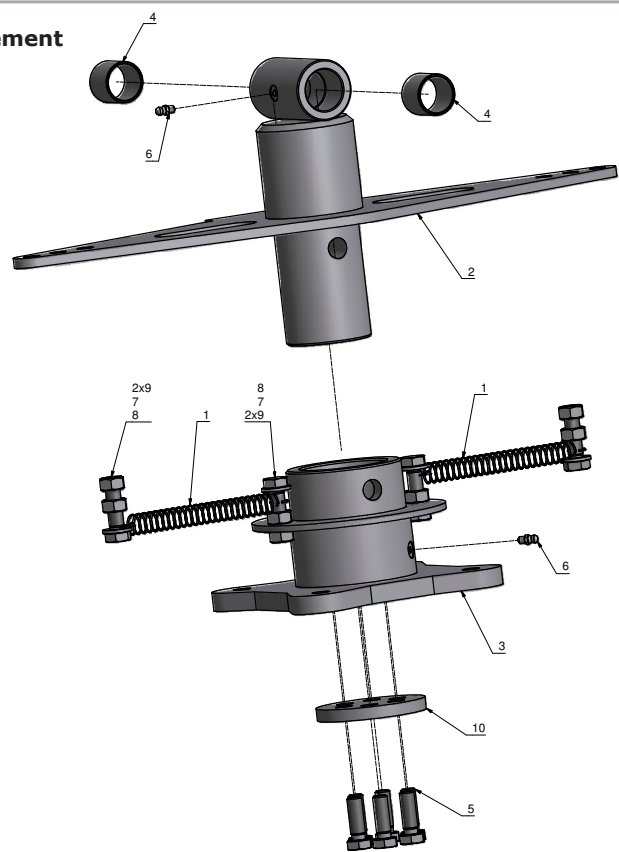


**Pre-assembled
Chassis Assembly HRZ FIX-
AS180**



Pos.	Description (Pre-assemb. chassis f. HRZ Fix-AS 180, Code 24526)	Code No.	DIN	Dimensions
1	Chassis assembly HRZ Fix-AS 180	22233		
2	Outrigger	23890		
3	Lower link pins	55994		28x151
4	Cotter pin	55751		
5	Hex screw	51490	933	M16x40
6	Standard bolts 40-155, g.	22851		
7	Washer	51652	125	17
8	Hydraulic cylinder	55976		80-40-600-970-370
9	Stud bolt	22850		
10	Spacer	22283		
11	Spacer 40-65	22847		
12	Self-locking hex screw	51611	985	M16
13	Self-locking hex screw	51609	985	M12
14	Hex screw	51485	933	M12x65
15	Top link pin Cat.2	55992		25x151
16	Plastic pad	55894		
17	Plain bearing, collarless	55926		
18	Hand lever assembly	22286		
19	Parallel guide (complete assembly)	22291		
20	Piston rod	24106		
21	Seeger ring	22841		
22	Circlip for shafts	51676		
23	Standard bolts 40-340	22849		
24	Ball lubricator	51163		AM 6x1
25	Hex screw	56021	933	M16x130
26	Spacer ring 8mm	23577		
27	Plain bearing, collar-less	55908		

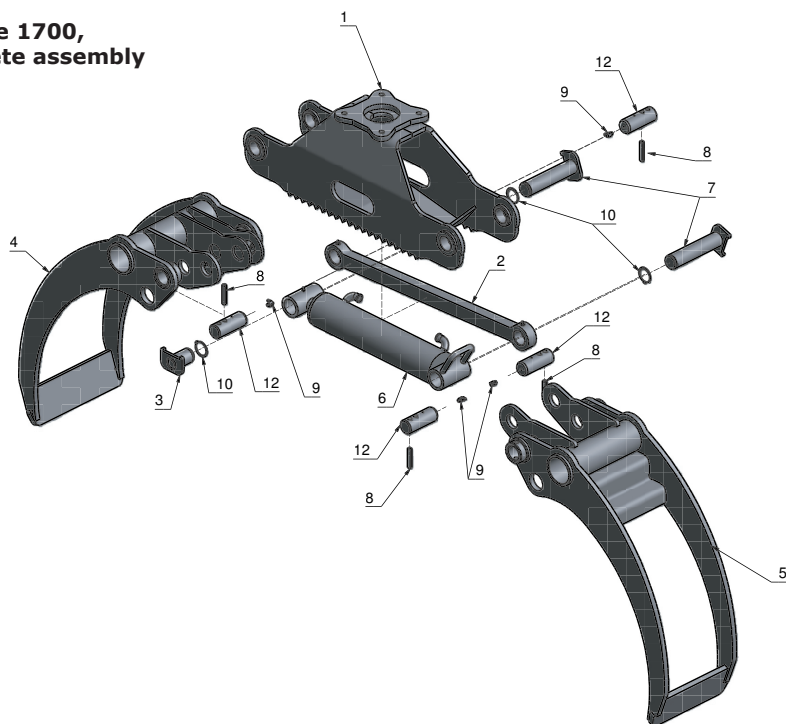
Grapple Slewing arrangement Complete assembly



Pos.	Description (Grapple pivotal hanger Code: 22387)	Code No.	DIN	Dimensions
1	Tension spring	55803		
2	Tapered bushing	22379		
3	Grapple joint	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		

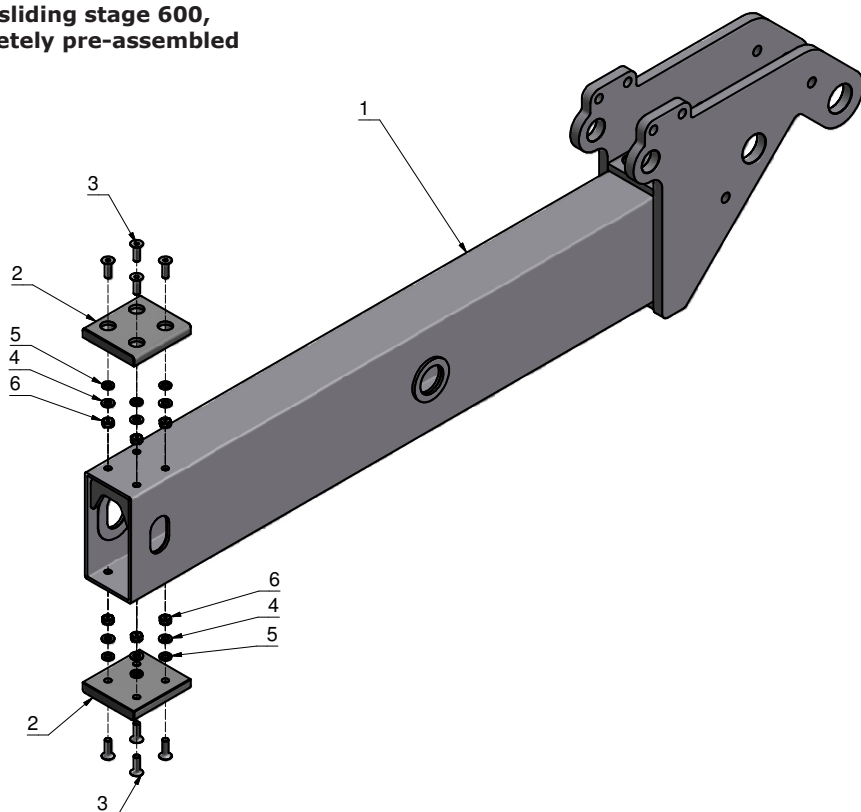
Pos.	Description (Grapple 1700, compl.assembly, Code 22349)	Code no.	DIN	Dimensions
1	Grapple housing 1700, (complete assembly).	24033		
2	Parallel guide (complete assembly)	23899		
3	Bespoke bolts 40-60	22356		
4	BG Grapple, large	22353		
5	BG Grapple, small	22354		
6	Hydraulic cylinder	55877		80-40-545-850-305
7	Bespoke bolts 40-178	22355		
8	Pin	55936	7346	12x60
9	Ball lubricator	55937		
10	Circlip for shafts	51676	471	40
11	Ball lubricator	51163		AM 6x1
12	Shaft lock 40-125	22351		

Grapple 1700, complete assembly



Pos.	Description (Pre-assembled, inner stage, Code 24526)	Code no.	DIN	Dimensions
1	Inner stage assembly, 600	22205		
2	Sliding pad	55881		
3	Countersunk-head screw with hex socket	53161	7991	M8x25
4	Washer	51648	125	8,4
5	Spring washer	51706	127	B8
6	Hex nut	51592	934	M8

**Inner sliding stage 600,
completely pre-assembled**



Description (ACCESSORIES) (optional attachments for HRZ Loaders)		Code no.	DIN	Dimensions
Hydraulic AS-Outer sleeve (main) 600 mm		96265		
Rotator 4.5 t		96255		
Rotator 4.5 t		96278		
Earth auger				
Bucket 1500 mm, 2 Excavation teeth		96256		
Top link pin for the bucket		96257		
Adapter				
Hydraulic top slewing arrangement		96260		
Hydraulic control unit				
4-sections		96263		
5-sections		96264		
6-sections		96268		
Professional proportional control		96252		
Enclosure for proportional control		25786		
Couplings for hydr. top link pin		96259		
Clip-in bracket		96269		
FLoating valve		96273		
Pos.	Description (Hydraulic top slewing arrangement, Code 96260), OPTIONAL	Code no.	DIN	Abmaße
1	Bolt	22822		
2	Lever	22343		
3	Connecting link	22341		
4	Hydraulic cylinder	55939		
5	Collar-less, plain bearing	55909		
6	Lockring for shafts	51676	471	40
7	Ball lubricator	51163		AM 6x1
8	Collar-less, plain bearing	55908		
9	Side plate	22340		
Pos.	Description (Hydraulic HRZ Loader)	Code no.	DIN	Dimensions
1	Hydraulic cylinder	55978		30-50-820-1420-600
2	Hydraulic cylinder	55957		90-45-390-193-583
3	Hydraulic cylinder	55973		PHD 208x4800
4	Hydraulic cylinder	55997		PHD 208x2500
5	Hydraulic cylinder	56079		PHD 208x1300
6	Hydraulic cylinder	55952		PHD 208x1300
7	Straight coupling	55786		L10 G3/8" A
8	Female coupler	55842		
9	Dust-cover	54621		yellow
10	Throttle valve	55988		3/8"

14. EC – STATEMENT OF COMPLIANCE

To the EC Machine Directive 42/2006 and EMC directive 2004/108/EC.

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 EC directives as well as the latest electromagnetic standards issued by the European Council and later enforced by all member states.

This statement of compliance does not apply to customer modifications of the equipment without manufacturer's consent in which case it will lose its validity.

Machine type: **Grapple Loader**
Model: **HRZ**
Production No.: see model label

Applicable
European Standards: EC Machine Directive 42/2006

Other harmonised Standards
especially:

In order to assure full compliance to these European Standards, the following national codes, standard practices, and Technical Specifications have been implemented:
EN 292-1/EN292-2
prEN 1553-1 May 1997 for farming attachments
EN ISO 3767-4 for equipment controlled and operated by a control valve

Person responsible of the technical
documentation: Jörg Kernstock (Management).

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Venue: Nordhausen

Date 25.08.2011



Jörg Kernstock (Director)

Official language in the country of use : English (Copy for customer's use)



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Subject to changes

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