

Grapple

GZ 1200 / 1400 / 1600 / 1700 / 1800 / RG 1450



English translation of the original operating instructions

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**Carefully read these operating instructions
before starting up the machine!**

These operating instructions are valid for:

Type	Article number
GZ 1200	GF-MHG-1
GZ 1400	GF-MHG-2
GZ 1600	GF-MHG-3
GZ 1700	GF-MHG-4
GZ 1800	GF-MHG-5
RG 1450	GF-MRG-1

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1 Declaration of EC Conformity

We hereby declare that this machine, in all its available technical versions, complies with the regulations of Machine Directive 2006/42/EG and with all directly connected standards.

The safety instructions and operating instructions delivered here are valid for this machine.

This machine may not be changed technically. Any change that has not been coordinated with us will make this declaration invalid.

It is forbidden to operate the machine without the belonging protecting devices, because it will no longer comply with the EC directives and because it will lead to a higher risk of injury.

Name and address of the person authorized to compose the technical documentation:

St. Georgen am Fillmannsbach, 2016

Karl Binderberger

CEO / Geschäftsführer

Binderberger Maschinenbau GmbH


Fillmannsbach 9


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2 Safety instructions


2.1 Meaning of symbols and hints

Please observe the meaning of the symbols and hints illustrated hereafter. They are classified according to danger levels and comply with ISO 3864-2.

DANGER	
	<p><i>Points to an immediately threatening danger.</i></p> <p><i>Disregarding this information may lead to death or to most severe injuries (invalidity).</i></p>

WARNING	
	<p><i>Points to a possible danger situation.</i></p> <p><i>Disregarding this information may lead to death or to most severe injuries (invalidity).</i></p>

ATTENTION	
	<p><i>Points to a possible danger situation.</i></p> <p><i>Disregarding this information may lead to death or to small / medium injuries.</i></p>

ADVICE	
	<p><i>Points to general information, useful operating instructions and handling recommendations, which however do not influence the safety and health of the personnel).</i></p>

2.2 Meaning of icons

	<ul style="list-style-type: none"> • Carefully read the operating instructions before starting up the machine! • Always wear ear protection and eye protection during operation! • Always wear steel-toed safety shoes during operation! • Always wear working gloves during operation! • The machine may be operated by a single person only! • Beware of hot materials! • Beware of rotating elements! • Beware of getting caught and dragged in! • Beware of crushing hazards!
	<ul style="list-style-type: none"> • Before maintenance work turn the machine off and protect it against inadvertent restart! • The machine may be maintained by a single person only! • Let the machine cool down sufficiently before starting maintenance activities! <p>Lubrication spots</p>

2.3 General safety instructions

This machine may only be operated by persons who have been trained, instructed and authorized. These persons must be familiar with the operating instructions and must act accordingly. The competences of the operating personnel must be determined clearly.

Apprentice personnel may only start working with the machine while being supervised by an experienced person. The completion of successful instruction must be confirmed in writing.

2.4 Proper use

The grapple has been designed and built exclusively for forestry use: lifting of logs, trunks and brushwood.

Any use beyond this purpose is not permitted. In case of any personal injuries and damages resulting from improper use, the responsibility lies with the operator of the machine, not with the producer!

Proper use also includes reading this operating manual and adhering to all information contained here, especially adhering to the safety instructions. Proper use also includes the execution of all inspection and maintenance tasks within the prescribed time intervals.

2.5 Required operator qualification

Operating this machine does not require special knowledge from the fields of machine engineering or electric engineering. The operator must however be at least **18 years** old. Before his first use of the machine, the owner of the machine must train and instruct him accordingly. For working with the machine, protecting shoes and tightly fitting clothes are required.

If the operator wants to execute maintenance and repair work, he must have the required technical knowledge.

2.6 Technical modifications to the machine

For safety reasons, the operator is not authorized to carry out technical modifications to the machine. This is also true for welding work on supporting parts. All planned technical changes must be authorized beforehand in writing by manufacturer Binderberger GmbH.

Only use original spare parts / original wear parts / original accessory parts – these parts have been designed especially for the machine. Using parts from other sources will not guarantee that they have been designed and manufactured according to the occurring stress and the required safety level.

Parts and optional equipment which have not been delivered by us also have no approval from our side for use with the machine.

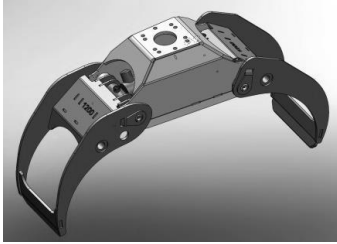
3 Description of the machine

3.1 Operating mode

The movement of the double-acting hydraulic cylinder opens and shuts the grapple arm. When completely closed, the arms are interlocked.

The chip separation machine may only be operated, maintained and repaired by persons who are familiar with it and which have been instructed about the dangers. The requirements for the operator, the maintenance and repair personnel are described in the following chapters.

3.2 Overview



GZ 1200



GZ 1400



GZ 1600



GZ 1700



GZ 1800




RG 1450

3.3 Technical data

	GZ 1200	GZ 1400	GZ 1600	GZ 1700	GZ 1800	RG 1450
Net weight [kg]	142	169	177	200	236	215
Opening width [mm]	1212	1419	1578	1700	1800	1425
Smallest permitted log diameter [mm]	68	68	130	90	130	40
Width [mm]	383	412	412	386	500	404
Maximum working pressure [bar]	200	200	200	200	220	200

4 Transporting the machine

4.1 Safety instructions concerning transport

WARNING	
	<p style="text-align: center;"><u>Danger of injury during transport!</u></p> <ul style="list-style-type: none">• Make sure that no persons stay within the danger zone and that a sufficient safety distance is kept at all times!• If the machine is transported in a slanting position, lubricants may escape! Direct skin contact will cause chemical burns!• The machine may only be lifted using the designed suspension points!

4.2 Transport while installed on the crane

Make sure to clamp the grapple to the chassis of the timber trailer or to a similar rigid trailer element.

4.3 Individual transport


For safe transport you must put the grapple onto a pallet and fasten it securely with appropriate tension belts.

4.4 Storage

- Before longer periods of grapple inactivity, you must retract all hydraulic cylinders. Otherwise there is a danger of surface rust.
- Before you store the machine, you should clean the grapple and remedy damaged spots of the paint layer.
- Regrease the grapple at all lubrication points.
- Areas which cannot be covered with a paint layer or be regreased should be coated with a thin layer of lubricant.
- Clean and dry all hydraulic couplings and hoses.
- Reduce the pressure inside the cylinders.
- Store the grapple in a cool and dry place.

5 Installing the machine

5.1 Safety instructions concerning machine installation

WARNING	
	<p style="text-align: center;"><u>Danger of injury from improper installation of the machine!</u></p> <ul style="list-style-type: none">• Always check the machine for transport damage before installing it!• Make sure that no persons can be endangered by installing the machine!• When installing machine connections, cables, hoses and pipes, make sure not to create any tripping points!• Never couple or uncouple pipes and hoses which are under pressure!• Pipes and hoses which are under pressure may not be installed inside the operator's cab! If this cannot be avoided, you must take proper precautions to protect the operator from injury in case a hose or pipe will burst!• Make sure that no persons are staying between the crane and the tractor!

5.2 Duties before starting operation

ADVICE



Execute these steps before starting operation:

- Grapple installation and all couplings must be performed according to the directives.
- Before every new start of operation, you must check all hoses, couplings, bolts and screw connections for tight fit.
- In case of ambient temperatures below 0° C / 32° F let the machine run for some 10 minutes in idle operation, without material.

5.3 Installing the grapple

5.3.1 Stub rotator

Always make sure that the grapple arbour and the attachment flange are free from soiling. Also verify that the arbour diameter matches the borehole of the attachment flange of the grapple exactly!

Enter the grapple arbour into the attachment flange completely.

Enter the securing bolt into its borehole. The securing bolt itself must always be secured with suitable safety cotter pins plugged into its own boreholes!

Finally connect the hydraulic cylinder to a double-acting control unit.


5.3.2 Flange rotator


Use the bolts to attach the flange rotor to the grapple.

Connect the hydraulic cylinder to a double-acting control unit.

6 Operation

6.1 Safety instructions concerning operation

DANGER	
	<p style="text-align: center;"><u>Danger of injury from getting caught or dragged in by moving machine components!</u></p> <ul style="list-style-type: none">• Always keep a sufficient safety distance towards moving machine components!

WARNING	
	<p style="text-align: center;"><u>Danger of injury during operation!</u></p> <ul style="list-style-type: none">• Make sure that only the operator is present at the control panel!• No other persons are allowed within the danger zone – a safety distance of at least 25 meters must be kept at all times!• Get familiar with the operating elements for the grapple before using it!• The machine must be placed on even and solid ground!• Make sure that no persons are staying between the crane and the tractor!

ATTENTION



Stumbling / tripping on objects lying about!

- Remove all objects that are not part of the machine from its vicinity.

ATTENTION



Danger of injury from missing personal protecting equipment!

- Always wear protecting gloves and steel-toed safety shoes.

ATTENTION



Danger of injury during operation!

- The machine must be operated by a single person only!
- Make sure that no further persons stay within the machine area.

6.2 Important instructions concerning operation

ADVICE



- The operator always has to take care that no unauthorized persons stay within the working area of the machine.
- Get information about the proper measures in case of malfunctions before you start up the machine.
- Execute all tasks listed in chapter “Duties before starting operation” before you start up the machine.
- After turning the machine off always execute the tasks listed in the next chapter “Machine shutdown”.
- Before the operator leaves the machine unattended, he must turn it off and secure it against inadvertent restart.

ADVICE



The GS label („Geprüfte Sicherheit“ / approved safety) may only be assigned under certain conditions.

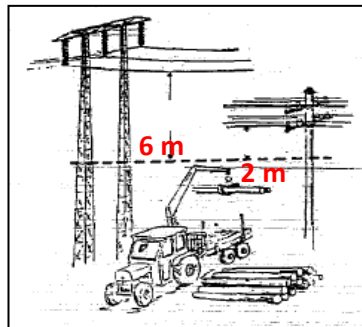
- Comfort operation system
- Log lifter

Operation underneath power supply lines:

It is mandatory to keep the safety distances during work underneath power supply lines. No part of the machine may ever get closer to power lines than indicated below.

Underneath low voltage lines: at least 2 meters

Underneath high voltage lines: at least 6 meters





6.3 Operating the grapple

Use the double-acting control unit to open the grapple and to grab a log. Shut the grapple arms to hold and lift the log.

7 Machine shutdown

7.1 Safety instructions concerning shutdown

DANGER	
	<p style="text-align: center;"><u>Danger of injury from getting caught or dragged in by moving machine components!</u></p> <ul style="list-style-type: none">• After turning the machine OFF wait until all moving components have come to a standstill• Always keep a sufficient safety distance towards moving machine components!

WARNING	
	<p style="text-align: center;"><u>Danger of injury during shutdown!</u></p> <ul style="list-style-type: none">• The operator always has to take care that no unauthorized persons stay within the working area of the machine and that a sufficient safety distance from the moving machine components is kept!• Never stay underneath floating loads, as they might fall down!

WARNING



Danger of injury from machine start
by unauthorized persons!

- After shutdown, secure the machine against unauthorized restart!
- Before leaving the machine unattended for a longer period, the energy supply must be disconnected!

ATTENTION





Danger of injury:
Getting caught by the rotating joint shaft!


- Secure the shaft protection against rotating!

8 Repair

8.1 Safety instructions concerning repair

DANGER	
	<p style="text-align: center;"><u>Danger of severe injury</u> <u>by starting the drive during repair work!</u></p> <ul style="list-style-type: none">• Turn the machine OFF!• Secure the machine against restart!

ATTENTION	
	<p style="text-align: center;"><u>Danger of slipping because of oil residue during maintenance work (oil exchange)!</u></p> <ul style="list-style-type: none">• Use a suitable collecting bin.• Remove spilled oil immediately!

ATTENTION	
	<p style="text-align: center;"><u>Danger of injury: Scalding</u> <u>on hot machine components and media!</u></p> <ul style="list-style-type: none">• Before starting any repair work let the machine cool down to ambient temperature!

ATTENTION**Danger of chemical burns from contact with lubricants!**

- Avoid skin and eye contact!
- Do not swallow or aspirate!
- Use proper protecting equipment (protecting gloves, eye protection).

ATTENTION**Danger of injury: Getting caught by the rotating joint shaft!**

- Secure the shaft protection against rotating!

8.2 Important instructions concerning repair

ADVICE



- Immediately replace all faulty machine parts.
- Use original spare parts only.
- Make sure that suitable collecting bins are available for any groundwater endangering media (oils, cooling agents).
- Use the specified operating media only.
- Self-securing bolts and nuts must always be replaced.
- All operating media which cannot be reused must be disposed according to the valid environmental regulations.
- Severe damage to the machine can result when installing wrong spare parts or wear parts.
- Welding work causes fire hazard. Always have a fire extinguisher at hand.
- Improperly installed cables may cause cable meltdown and cable fire.
- Never release the machine for operation without all safety installations provided by the manufacturer available.
- It is strictly forbidden to remove safety instructions and safety installations from the machine.
- If an information label on the machine is no longer legible you must replace it.
- Always observe the warning instructions attached to the machine. They help avoiding danger situations.
- Do not execute repair work if you do not possess the required qualification.

8.3 Instructions concerning work on hydraulic equipment

Work on the electrical equipment of the machine may on principle be executed by skilled technicians for hydraulic systems only.

- Before starting any work on hydraulic systems, relieve the pressure from the hydraulic system and all its components.
- Make sure that suitable collecting bins are available for any groundwater endangering media (oils, cooling agents).


8.4 Duties before ending the repair work


After the repair steps have been executed and before machine restart, these tasks must be observed:


- Verify whether all bolt connections loosened before have been retightened properly.
- Verify whether all protecting devices, covers, container lids etc. have been installed properly again.
- Make sure that all used tools, materials and further equipment has been removed from the working area again.
- Clean the working area and remove / clean up any spilled liquids and similar materials.
- Make sure that all safety devices of the machine are in perfect operating status again.
- Verify the function of all safety devices. Never release the machine for operation as long as any safety device is not functioning properly.
- Execute a test operation run with a functional control of all repaired components.
- As long as you have not finished the repair work, you must secure the machine against inadvertent restart.
- The use of open flames and smoking is prohibited.

9 Maintenance

9.1 Safety instructions concerning maintenance

DANGER	
	<p style="text-align: center;"><u>Danger of severe injury</u> <u>by starting the drive during maintenance work!</u></p> <ul style="list-style-type: none">• Turn the machine OFF!• Secure the machine against restart!• Disconnect the machine from the energy supply!

ATTENTION	
	<p style="text-align: center;"><u>Danger of slipping because of oil residue during maintenance work (oil exchange)!</u></p> <ul style="list-style-type: none">• Use suitable collecting bins.• Remove spilled oil immediately!

ATTENTION	
	<p style="text-align: center;"><u>Danger of injury: Scalding</u> <u>on hot machine components and media!</u></p> <ul style="list-style-type: none">• Before starting any repair work let the machine cool down to ambient temperature!• Keep easily flammable materials away from hot surfaces!

ATTENTION



Danger of chemical burns from contact with lubricants!

- Avoid skin and eye contact!
- Do not swallow or aspirate!
- Use proper protecting equipment (protecting gloves, eye protection).

ATTENTION



Danger for the environment!

- Make sure that no oil can escape into the environment.
- Spilled oil will contaminate surface water and ground water!

9.2 Cleaning

Remove all dirt and residue from the machine after every operation run and before maintenance work!

After you cleaned the machine with water you must regrease it!

9.3 Replacing the hydraulic hoses

Replace all hydraulic hoses not later than after 5 years of use.

If a hydraulic hose shows evident damage, it must be replaced immediately, because otherwise it may cause severe injuries and grave damage!


9.4 Maintenance schedule


Regular maintenance is the best way to achieve efficient and economic operation of your chip separation machine. The machine has already been tested and adjusted carefully by the manufacturer.


	After 10 hours	New machine after 50 hours	Every 250 hours, at least once a year
Lubrication spots	-	x	x

10 Help in case of breakdowns

10.1 Safety instructions

DANGER	
	<p style="text-align: center;"><u>Danger to life by starting the drive after a breakdown occurred!</u></p> <ul style="list-style-type: none">• Turn the machine OFF!• Secure the machine against restart!

ATTENTION	
	<p style="text-align: center;"><u>Danger of injury: Scalding on hot machine components and media!</u></p> <ul style="list-style-type: none">• Before starting any repair work let the machine cool down to ambient temperature!• Keep easily flammable materials away from hot surfaces!

ATTENTION	
	<p style="text-align: center;"><u>Danger of chemical burns from contact with lubricants!</u></p> <ul style="list-style-type: none">• Avoid skin and eye contact!• Do not swallow or aspirate!• Use proper protecting equipment (protecting gloves, eye protection).

10.2 Troubleshooting

If a malfunction cannot be repaired with the measures above:

Please contact your dealer, he will organize further assistance!

11 Guarantee, warranty

Terms of guarantee 950601:

Manufacturer Binderberger Maschinenbau GmbH extends its warranty to a period of 2 years for parts which do not perform properly because of material deficiencies or faulty manufacturing.

Components we have purchased before, like tyres, axles and valves, are subject to a one-year warranty issued by our suppliers.

The warranty period comes into effect on the day of delivery to the buyer.

The warranty does not cover faults and breakdowns which were caused by normal wear, carelessness, faulty operation or faulty assembly. Hydraulic hoses and hydraulic couplings are exempt from warranty.

Costs arising during warranty processing, like disassembly work and shipping expenses, will not be reimbursed. Warranty is granted under the condition that the warranty claim has been declared directly to manufacturer Binderberger GmbH. Faults must be remedied according to a joint consultation between buyer, authorized dealer and manufacturer Binderberger GmbH.

If the manufacturer considers it appropriate, the device or the concerned device components must be sent in to the manufacturer for warranty measures. These data must be included with the shipment: Type of the device, serial number, date of delivery, name and address of the owner.

Warranty becomes void if the machine differs from the original model, e.g. because of technical alteration, change of settings, additional attachments or integration of parts which have not been delivered by the manufacturer.

Furthermore, our terms of delivery NL92 apply.

12 Proper reaction in case of accidents

Take care of a periodic information update concerning the available facilities and means for First Aid.

In case of an accident including injured persons, damage to machines or to buildings / structures you must first provide initial treatment for the injured person, then inform the person in charge as soon as possible.

To alarm the proper ambulance emergency resources, you must pass information about the severity of personal injuries and of damage.

In case of a disaster (fire) leave the machine immediately.

13 Notes

Notice

Manufacturer Binderberger GmbH permanently works on the improvement of its products. We reserve the right to execute updates of the illustrations and descriptions of this operating manual and of the spare parts list. The customer cannot deduce a claim for changes / updates to machines that have already been delivered.

The published technical dimensions and weights are not binding.

Subject to errors.

Dealer's stamp:

Type label:



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