



GOLDSCHMIDT

Smart Rail Solutions



GP 3600 +S
PROFILE GRINDER GP

TRANSLATION OF ORIGIN

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Document:	Operation manual GP 3600 +S (Profile grinder GP)
Version:	1.0 (translation of origin)
valid from serial number:	GP3600+S-0012
Year of construction:	2026
Country of origin:	Germany

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HISTORY OF CHANGES

Version	Date	Change / Description	Author	Approved by
0.0	2025-04-25	First edition	Goldschmidt Holding GmbH	Elektro-Thermit GmbH & Co. KG
1.0	2026-05-21	Modification of rating plate and technical data applicable from serial number: GP3600+S-0012	Goldschmidt Holding GmbH	Elektro-Thermit GmbH & Co. KG

STRUCTURE AND CONTENT OF SAFETY INSTRUCTIONS

This operation manual contains safety instructions that point out potential hazards and risks that could result in personal injury, property damage, and/or environmental damage. The way these safety instructions are structured, as well as their contents, is based on the ANSI Z535 standard.

Safety instructions related to personal injury



DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

The contents of all safety instructions related to personal injury have been structured in conformity with the German SAFE method:

SIGNAL WORD/ SYMBOL

S – Schlagwort (keyword)

A - Art und Quelle der Gefahr (type and source of hazard)

F - Folgen bei Nichtbeachtung (consequence of failure to observe the instruction)

E - Entkommen (how to avoid the hazard)

Safety instructions related to property damage and the environment



NOTICE (white text on a blue background) indicates potential property damage.



NOTICE (black text on a green background) indicates potential environmental damage.

General notes



NOTICE (black text on a white background) indicates general information that needs to be taken into account when handling the product.

This operation manual has safety instructions at various points in order to ensure that meaningful information is provided in regard to potential hazard sources:

- Introductory safety instructions (at the beginning of the document)
- Section-specific safety instructions (at the beginning of a section)
- Embedded safety instructions (for specific instructions).

SAFETY INSTRUCTIONS

Safety instructions related to personal injury



RISK OF INJURY.

Working under the influence of drugs and/or alcohol will result in serious injury.

Consuming drugs and/or alcohol in the work area is strictly prohibited.

Operators under the influence of drugs and/or alcohol are strictly prohibited from operating the equipment.



RISK OF INJURY.

Unforeseeable operating conditions may occur if any of the guards or safety devices on the profile grinder are faulty or removed. Personal injury and property damage may occur.

- Before working with the machine, make sure to familiarise yourself with the entire operation manual.
- Do not, under any circumstance, operate the machine if it is not in proper working condition! Make sure to always observe all instructions in this operation manual.
- Follow all safety instructions without fail!



RISK OF INJURY.

Flying sparks pose a risk of injury to operators and other people in the vicinity. Readily flammable objects can combust spontaneously.

- Wear flame-resistant clothes when working.
- Wear appropriate eye protection.
- Remove any highly flammable objects from the vicinity.



RISK OF INJURY.

There is a risk of injury due to fire and/or explosion.

Damaged batteries and incorrectly handled batteries may behave in an unforeseeable manner, which can result in a fire or explosion and the associated risk of injury.

- Do not, under any circumstance, use any damaged or modified batteries!
- Properly dispose of all damaged batteries!
- Do not expose the batteries to fire or extreme temperatures!
- Follow all charging instructions and make sure to never charge the batteries outside of the temperature range specified in the manual provided by EGO (please refer to the EGO operation manual, Chapter 1.4 "Further applicable documents" on page 4).

**RISK OF INJURY.**

There is a risk of injury posed by repairs that are not carried out correctly.

Repairs to the profile grinder must be carried out exclusively by Elektro-Thermit GmbH & Co. KG or specially trained personnel.

- Work on electrical system components must be carried out exclusively by qualified electricians.
- Parts and components must be replaced exclusively with identical spare parts. When replacing a component, make absolutely sure to observe all the component manufacturer's instructions and specifications.

**HOT SURFACES.**

Hot surfaces pose a burn hazard.

The cup grinder and/or the rail may be hot after grinding and result in burns or other irreversible injuries if touched.

- Make sure to always wear all necessary personal protection equipment (especially work gloves).
- Let the components cool down first before changing the cup grinder or carrying out maintenance work.
- Let the rail cool down after welding (below 40° C / 104° F).

**RISK OF INJURY.**

A defect on the machine can lead to unanticipated operating statuses. People may get injured.

Only operate the machine in technically perfect condition, paying due attention to all chapters in the operation manual.

**RISK OF INJURY.**

Incorrect operation of the machine or failure to observe the safety instructions may result in hazards for people or may damage the machine.

Familiarise yourself with the entire operation manual before working on the machine.

The operating and maintenance personnel must have assured access to the operation manual at all times!

**RISK OF INJURY.**

If the machine is not used in the intended way, unforeseeable operating conditions might arise. Severe injuries to personnel may occur.

Repairs must not cause any change in function. Do not tamper with or modify the system.

**CRUSH HAZARD.**

Risk of injury from the crushing of body parts

If people's limbs are under the grinding wheel or under the guide system when working with the machine, there is a risk of serious injury from crushing possibly involving broken bones or even the severing of entire limbs.

- When operating this machine, never place hands or feet below the grinding head or under the guide system.
- Always wear work gloves in protection class S3.
- Always wear work gloves.
- Everyone except for the operator must maintain a safe distance of 5 metres from the machine while it is switched on.

**RISK OF INJURY.**

Unauthorised access poses a risk of injury.

Whenever you are not operating the profile grinder, make sure that it cannot be turned on by accident.

Remove all batteries from the profile grinder when not operating it.

**HEARING LOSS.**

Noise levels during grinding may result in permanent hearing loss.

Make sure to always wear hearing protection.

Individuals who are not working with or on the grinding machine must stay at a minimum distance of 5 m.

Agree on clear and effective hand signals for communication.

**RISK OF INJURY.**

Poor weather conditions (rain, snow) pose a risk of injury due to poor visibility or slippery surfaces.

- Stop all work if the surfaces you will be standing on are slippery.
- Stop all work if visibility is poor.

**RISK OF INJURY.**

There is a risk of injury due to abnormal vibrations.

If you notice any abnormal vibrations when working with the profile grinder, stop operating the machine immediately.

- Start troubleshooting (please refer to Chapter 6 "Fault, cause and elimination" on page 38).
- Turn the profile grinder off until the cause of the vibrations has been found and fixed.

**RISK OF INJURY.**

There is a risk of injury due to failure to pay attention, as well as due to signs of mental fatigue that increase the risk of personal injury and property damage.

- Always observe all legally required breaks.
- Do not, under any circumstance, work alone. Make sure to rotate the task on a regular basis if possible.

**RISK OF INJURY.**

There is a risk of injury posed by the machine's weight. Physically heavy work can cause damage to the body in the medium and long term.

- Always observe all legally required breaks.
- Do not, under any circumstance, work alone. Make sure to rotate the task on a regular basis if possible.

**RISK OF INJURY.**

There is a risk of injury posed by the machine's weight. The profile grinder weighs 50 kg / 110 lbs without batteries. There is a risk of injury when the machine is being transported.

- Carrying the profile grinder is mandated as a two-person job.
- Only use the handles and the transport roller to carry it,
- Use the lifting eyes for longer transport routes.
- Always wear work gloves in protection class S3.

**RISK OF INJURY.**

There is a risk of injury posed by hazards from the surroundings of the profile grinder.

- Please note that it is impossible for this operation manual to determine and list all the hazards that may be posed by the profile grinder's surroundings and by unforeseeable operating conditions.
- Do not make any alterations to the profile grinder that could result in a change to the way it works.

**RISK OF INJURY.**

Failure to pay attention and mental or physical fatigue will increase the risk of personal injury and property damage.

- Always observe all legally required breaks.
- Do not, under any circumstance, work alone. Make sure to rotate the task on a regular basis if possible.

Safety instructions related to property damage

NOTICE

Make sure that there are no highly flammable or explosive substances in the vicinity. If necessary, remove any combustible substances from the work area and ensure that there is adequate ventilation.

NOTICE

Do not place the Profile grinder in water or hose it down.

NOTICE

Genuine spare parts and/or accessories authorised by the manufacturer help ensure safety. Using any other accessories will void our liability for resulting damages. The manufacturer hereby disclaims all liability for any components retrofitted by the operating company.

NOTICE	Alterations, repairs, and modifications require the manufacturer's explicit approval.
NOTICE	Keep safety signage legible. If safety signage gets damaged or goes missing, the operating company must provide for proper replacement.
NOTICE	The Operation manual GP 3600 +S must be read carefully before starting any operation, assembly, installation, and/or maintenance work!
NOTICE	A hard copy of the Operation manual GP 3600 +S must be available in legible condition at the location of use.
NOTICE	In addition to the information in this operation manual, due compliance is mandatory with the statutory regulations for accident prevention and environmental and occupational safety as well as the accident prevention regulations of the operating company. Strict compliance is also required with the safety regulations issued by the railway authorities for working on and near the tracks.

Safety instructions related to the environment

	Environmentally hazardous substances must be properly disposed of in compliance with all applicable requirements and regulations. Make sure to observe the manufacturer's data sheets and safety data sheets. For more detailed information, please refer to Chapter 9 "Disposal" on page 69.
NOTICE	Properly dispose of all packaging material. For more detailed information, please refer to Chapter 9 "Disposal" on page 69.

RESIDUAL RISK WARNING

All the components in the Profile grinder GP 3600 +S have been designed in line with the state of the art. Regardless of this, however, their use may pose hazards to the operator and to third parties, the environment, and/or other equipment. Accordingly, the Profile grinder GP 3600 +S must be used only when it is in proper working condition. Moreover, it must always be used in conformity with all applicable safety rules and regulations and the Operation manual GP 3600 +S.

Risk of workplace injury

Welding and grinding work both take place in work environments where it is possible for welding and other work to be in progress at the same time and in the immediate area. The potential risk of injury is therefore greater, examples being:

- rail traffic on adjacent tracks,
- getting run over by construction site vehicles,
- getting snagged on construction site vehicles and other moving items of machinery,
- loss of footing on slippery, wet or oily surfaces,
- stumbling over obstacles,
- falling onto pointed or sharp objects,
- getting burned on hot surfaces.

Pay attention to the following precautionary measures:

- comply with all construction site regulations;
- Make sure that there is nobody else within the machine's danger zone
- always work with sufficient lighting;
- always be careful and pay attention;
- ensure sufficient ventilation;
- Do not, under any circumstance, leave the running drive unit unsupervised

Danger to life when working on railway tracks

During track construction work, there is always a risk of people being hit by passing trains, causing severe to fatal injuries.

- Before working on the track bed, always ensure that the track has been closed off to permit that work. Never work on a track that is open for rail traffic.
- Always proceed with great caution whenever the construction site is close to railway tracks open to rail traffic.
- Always set down equipment and materials in a place where they cannot collide with other rail vehicles.

Risk to life from electric shock

There is a risk of serious injury from electric shock when working on live parts and cables. This can lead to ventricular fibrillation, cardiac arrest or respiratory paralysis with a fatal outcome.

- Never use the machine if a conductor rail at the work site is live.
- Never use this machine on a conductor rail that is electrically live at the time.
- Always ensure that there is no risk of electric shock.

Risk of injury from falling, slipping and sliding

When working on the track bed, there is a risk of slipping and falling on the gravel, causing injuries such as contusions or even broken bones.

- When working with the machine, always maintain a firm stance..
- Do not work with the machine on a gradient of more than 10°.
- Wear work gloves in protection class S3.

Risk of damage to hearing

The A-weighted emission sound pressure level LPA at the workplace can be up to 70 dB(A) and the A-weighted emission noise level LWA at the workplace can be up to 92 dB(A).

Exposure to noise can damage hearing and lead to short-term hearing loss and mental overload. Always wear ear defenders when working with this machine.

ABBREVIATIONS

Units of measurement	
%	Percent
°C	Degrees Celcius
°F	Degrees Fahrenheit
Ah	Ampere-hour
dB (A)	Decibels at a specific measuring distance
hp	horsepower
in	inch
kg	Kilogram
kW	Kilowatts
L	Litres
L/min	Litres per minute
lbs	Pounds
Ref. No.	serial number
mm	Millimeters
HP	Metric horsepower (1 HP = 0.735 kW)
rpm	Revolutions per minute
V	Volts

General	
max	maximum
min	minimum
e.g.	for example

GLOSSARY

Symbols and pictograms

Symbol	Explanation
	Crush hazard warning label
	Mandatory action: read and follow the operation manual
	Mandatory action: wear protective clothing
	Mandatory action: wear safety footwear
	Mandatory action: wear work gloves
	Mandatory action: Wear safety eyewear

Symbol	Explanation
	Mandatory action: Wear hearing protection
	Mandatory action: Lifting point

Notions

Term	Explanation
Grooved rail 	The grooved rail is a special form of flat-bottom rail which is notably used for tram rails. They are characterised by the groove rolled into the head, which ensures a clear channel for the wheel flange at all times, regardless of the condition of the road surface extending up to the rail level. Flat grooved rails: from 52Ri1
Flat bottom rail 	Flat-bottom rails, also known as flange rails, are mainly used for railway systems. They consist of a wide, flat base, which is fastened to sleepers. A narrow web stands vertically on this base, supporting the rail head and forming the running surface for the wheels.. Flat-bottom rails: from 46E1

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1 INTRODUCTION

Summary

This section provides information regarding the scope and content of this operation manual, as well as references to additional documents.

1.1 Information about this document

This operation manual describes how the Profile grinder GP 3600 +S works and its components.

This operation manual must be:

- Considered part of the product
- Stored safely throughout the product's entire service life
- Passed on to any subsequent users

1.2 Validity

This operation manual (version 1.0 (translation of origin)) is meant for the following machine configuration:

- Profile grinder GP 3600 +S with serial number GP3600+S-0012

1.3 Requirements for operators

The operators who will be using the Profile grinder GP 3600 +S must:

- Be at least 18 years old
- Have the required qualifications for the job
- Have received training regarding how to operate the machine properly
- Have passed a medical assessment of fitness for work

NOTICE

All applicable accident prevention regulations must be complied with without fail. Moreover, all operation and maintenance manuals must be followed without exception.

NOTICE

The operating company must make sure that its operating personnel has fully understood the Operation manual GP 3600 +S's contents.

1.3.1 Skills

Only individuals who meet the following requirements are allowed to work with and on the machine:

- Operators must have read and understood this operation manual in its entirety.
- Operators must be in perfect health and in full possession of their mental and physical faculties.

- Operators must be rested and must not be under the influence of any drugs, alcohol, or medications that could have a negative impact on their ability to react to situations and absorb information.
- Operators must be regularly briefed on impediments, hazards, fire safety rules, and special rules regarding what to do and what not to do.
- Operators must wear all required personal protection equipment in order to ensure that all occupational health and safety requirements are met.
- Operators must always observe their employer's rules and policies regarding safety and accident prevention and comply with all regulations that are relevant to personal safety and the safety of third parties.

1.3.2 Qualification level

In order to ensure that the machine will be operated safely and as intended, two different qualification levels must be considered:

- Operating personnel:

Is trained on how to regularly operate the machine, receives continuous training regarding technical innovations, and has the required basic skills and understanding needed to work with the Profile grinder GP 3600 +S.

During their initial training session, operators must receive training regarding the following main points:

- Function description,
 - explanation of its components;
 - explanation of the potential hazards;
 - How to use the machine
 - detection of faults and malfunctions.
- Maintenance staff/qualified personnel:
Staff who have been specifically trained and instructed in maintenance, servicing and repair work on the machine (skilled worker).

Table 1-1 on page 2 lists the various individual tasks that apply to each of the two qualification levels.

Tab. 1-1 Qualification level

Occupation	Qualification level	
	Operating personnel	Maintenance/specialised personnel
Working with the machine, operating the machine	x	x
Cleaning the machine	x	x
Visual inspection	x	x

Tab. 1-1 Qualification level <continued>

Occupation	Qualification level	
	Operating personnel	Maintenance/specialised personnel
Identifying malfunctions and other issues	x	x
Maintenance work		x
Troubleshooting and repairs		x

1.3.3 Personal protection equipment

Provided that the operating company does not set forth any additional rules, policies, or guidelines, the following protection equipment must be worn when working with or on the machine:

Tab. 1-2 Personal protection equipment

Symbol	Protective equipment	Use
	Wear protective clothing Welding clothing in conformity with EN 470-1; if necessary, high-visibility clothing in conformity with EN 471	• Transport, • Commissioning, • Operation, • Decommissioning, • Maintenance and • Cleaning/care.
	Wear safety footwear (high-top S3 safety footwear in conformity with EN ISO 20345)	
	Wear work gloves (heavy-duty gloves in conformity with EN 388 (4242), EN 402; if necessary, heat-resistant work gloves in conformity with EN 407)	

Tab. 1-2 Personal protection equipment <continued>

Symbol	Protective equipment	Use
	Mandatory action: Wear safety eyewear	- Operation (grinding)
	Mandatory action: Wear hearing protection (ear plugs in accordance with EN 352) / EN 458)	

1.4 Further applicable documents

NOTICE	Passing the Operation manual GP 3600 +S on to third parties requires written consent from Elektro-Thermit GmbH & Co. KG.
NOTICE	The manufacturer's technical documentation is protected by copyright.
NOTICE	In addition to the information in this Operation Manual, due compliance is mandatory with the statutory regulations for accident prevention and environmental protection as well as the accident prevention regulations of the operating company. Compliance is also required with the safety regulations issued by the railway authorities for working on and near the tracks.

Additional applicable documents are listed in the tables below and are an integral part of the included contents:

Tab. 1-3 Additional applicable documents – supplier documentation

Technical documentation (supplier documentation)
Operation manual EGO Power+ 56V ARC lithium™ Rechargeable battery [made by EGO] and battery charger "700 W RAPID+ charger CH7000E"
Operation manual for battery-operated motor by EGO

Tab. 1-4 Additional applicable documents – manufacturer documentation

Technical documentation (manufacturer documentation)
Work instructions for the relevant Thermit® welding process

1.5 Scope of delivery

NOTICE

The EGO Power+ 56V ARC lithium™ batteries and the charger are not included.

The included contents, as defined contractually, are listed in the following table (please refer to Table 1-5 on page 5):

Tab. 1-5 Scope of delivery

Quantity	Designation
1	Profile grinder GP 3600 +S
1	Cup grinder 125 x 65-M20

2 CONSTRUCTION DESCRIPTION

Summary

An overview of the Profile grinder GP 3600 +S, the names of the various sub-assemblies and components, and what they do.

NOTICE

Unauthorised alterations are impermissible.

The manufacturer hereby disclaims all liability for any resulting personal injury and/or damages to machinery and other property.

NOTICE

The manufacturer hereby disclaims all liability for any improper or unintended use and any resulting injury and/or damages.

NOTICE

Any other use of the Profile grinder GP 3600 +S, including any use that extends beyond the intended use, is impermissible.

2.1 Function description

The Profile grinder GP 3600 +S is used to grind rail heads. To satisfy this function, the GP 3600 +S uses a rotary grinding head that is in contact with the rail head. The grinding cup is driven by a battery-powered motor. This engine transmits power to the grinding cup via a belt drive.

The rail head areas shown in Figure 2-1 on page 6 can be processed.



Fig. 2-1 Grinding area of the rail head

In addition, the GP 3600 +S is mounted on rollers and is held on the rail by a guide system. The rail guide is suitable for flat-bottom rails and for grooved rails. The guide system can be adjusted to suit different rail profiles. The operator can move the machine along the rail.

The upper control arm is height-adjustable to facilitate ergonomic working for the operator.

A tipping fixture helps to tilt the grinding cup and the functional components of the machine on the rail head, and to grind the sides of the rail head.

A stand allows the machine to be safely parked at the work site it without having to be lifted off the rail.

2.2 Intended use

The Profile grinder GP 3600 +S is suitable for the accurate profile grinding of butt welds, running surfaces, rail head rounding and the side surface of steel rails with flat-bottomed profiles, as well as groove profiles, in manual operation without the use of cooling lubricants.

The Profile grinder GP 3600 +S can be used on flat-bottom rails from rail profile 46E1 as well as on grooved rails from rail profile 51Ri1.

The battery-powered drive enables use in tunnels and inner-city areas.

Intended use also extends to:

- Reading and observing the operation manual
- Observing all maintenance intervals
- Complying with all applicable occupational health and safety and accident prevention regulations throughout the machine's entire lifecycle
- Exclusively using operators who have the required technical training, and authorization from the operating company, to be able to carry out work with and/or on the machine

2.3 Operating conditions

NOTICE	Do not operate the machine if real conditions differ from these operating conditions.
NOTICE	Before putting the machine into operation, always check to make sure that all operating conditions are met.
NOTICE	If the batteries have gotten too cold (e.g., overnight), let the machine run idle for a few minutes so that the batteries will be able to reach their operating temperature. Running the motor under load while the batteries are too cold will shorten their life substantially.

Table 2-1 on page 7 describes the operating conditions in greater detail:

Tab. 2-1 Operating conditions GP 3600 +S

Operating conditions	
Ambient temperature when operating the machine	-20 °C to +40 °C (-4 °F to +104 °F)
Ambient temperature when charging the batteries	+5 °C to +40 °C (+41 °F to +104 °F)

The following conditions must be met while the machine is being operated:

- No protective equipment or other components can be shut down.
- The machine must always be operated in technically perfect condition.
- All inspection and maintenance intervals must be complied with.
- Do not operate the machine in hazardous locations or in the vicinity of flammable or explosive liquids or gases.
- The work area must be adequately lighted in order to make it possible to identify potential hazards in a timely manner.
- Only ever operate the machine in dry locations.

2.4 Main sub-assemblies

Figure 2-2 on page 8 shows the main sub-assemblies on the Profile grinding machine GP 3600 +S.

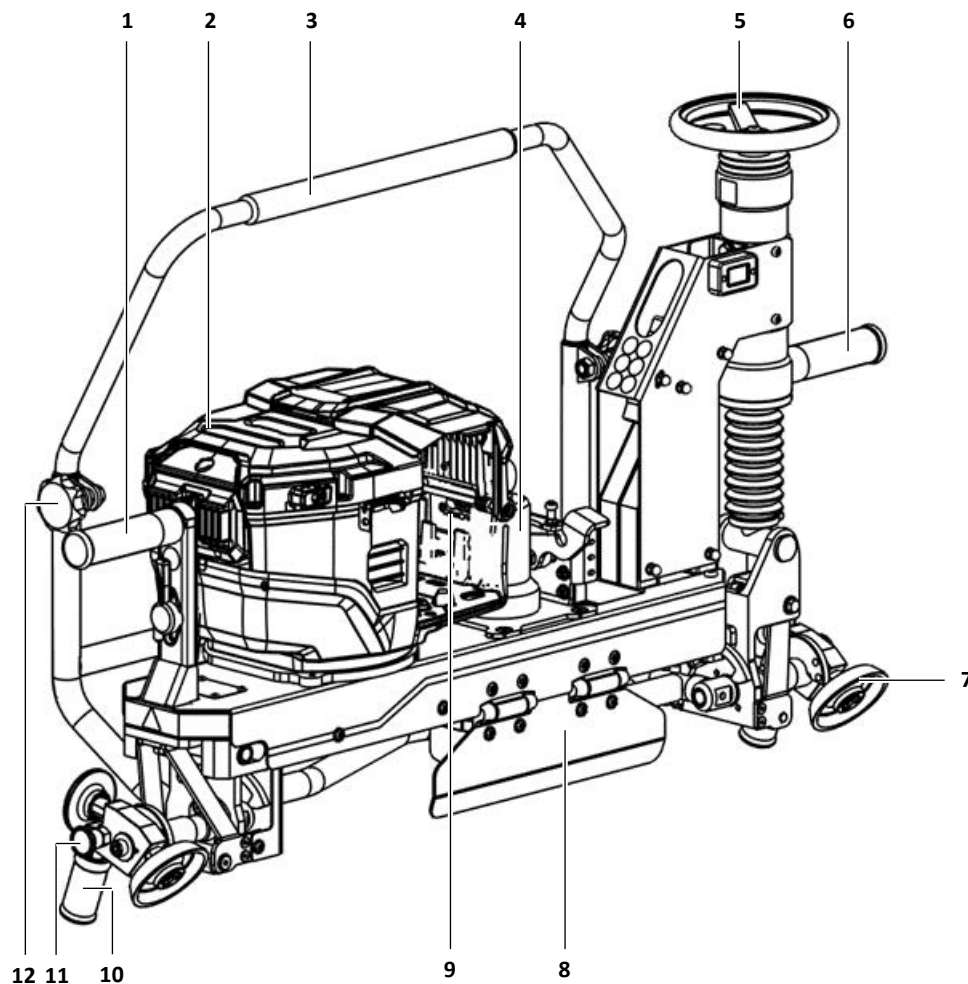


Fig. 2-2 Main sub-assemblies GP 3600 +S

1	Handle	5	Handwheel	9	Blocking grinding spindle
2	Drive motor	6	Handle	10	Guide roller
3	Handlebar	7	Rail guide	11	Switch Guide roller
4	Grinding spindle	8	Spark and Rupture protection	12	Star knob screw (handlebar)

2.4.1 Rating plate

Figure 2-3 on page 9 shows the rating plate of the Profile grinder GP 3600 +S.

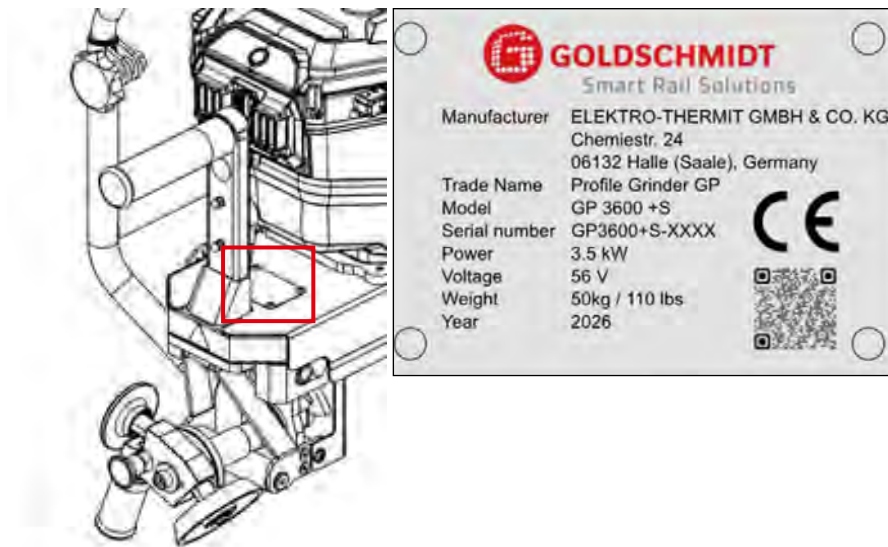


Fig. 2-3 **Rating plate**

The rating plate contains the following information:

- Manufacturer information,
- Product name,
- the product model,
- the serial number,
- the rating,
- Voltage,
- the dead weight,
- the year of manufacture,
- CE marking and
- QR code for the operation manual

NOTICE

The operating company must ensure that this type plate is replaced in the event of damage or loss.

2.5 Operator control and display elements

The following sections describe the individual controls and indicators on this unit.

2.5.1 Adjustment lever

The Adjustment lever is located on the drive motor (Figure 2-4 on page 10). With the Adjustment lever, the speed of the grinding wheel can be controlled manually, between min. 3000 rpm and max. 3600 rpm.

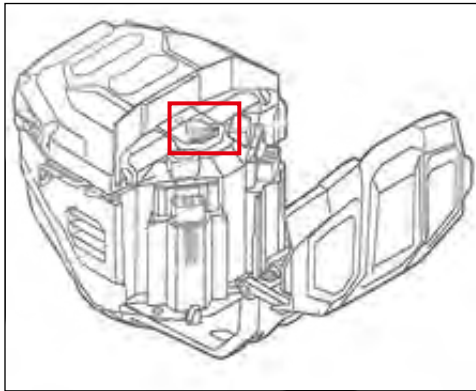


Fig. 2-4 Adjustment lever

The Adjustment lever can be moved to the following positions and in between:

Position	Description
"TURBO" position 	Moving the Adjustment lever in the "TURBO" position will set the highest possible speed (3600 rpm) for the grinding process.
"ECO" position 	Moving the Adjustment lever in the "ECO" position will set the lowest possible speed (3000 rpm) for the grinding process.

2.5.2 Ejection mechanism

The battery-operated motor is equipped with an ejection mechanism that pushes the motor upwards when activated (see Figure 2-4 on page 10).

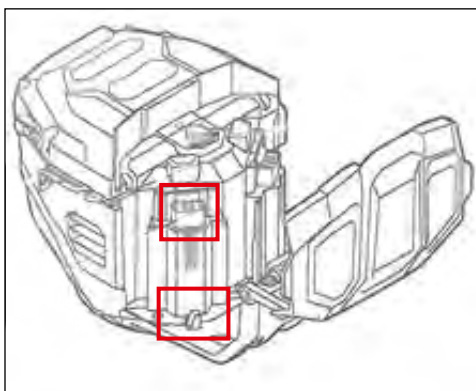


Fig. 2-5 Ejection mechanism

2.5.3 Cable pull

The battery-operated motor is equipped with a pull cord used to start the motor (see Figure 2-4 on page 10).

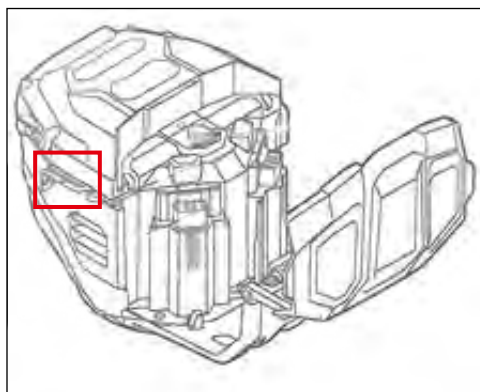


Fig. 2-6 Cable pull

2.5.4 Battery release button

In addition, there is a battery release button on the battery-operated motor, with which to release the inserted batteries. (see Figure 2-4 on page 10).

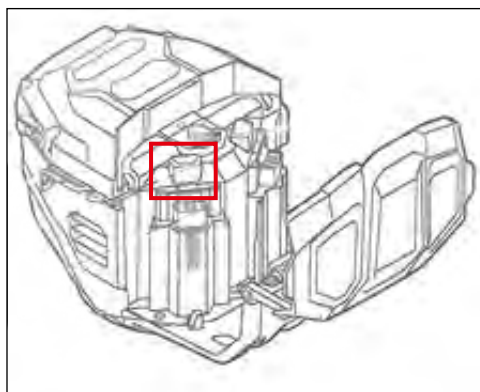


Fig. 2-7 Battery release button

2.5.5 motor switch

The Profile grinder GP 3600 +S is switched off by means of the motor switch (see Figure 2-4 on page 10).

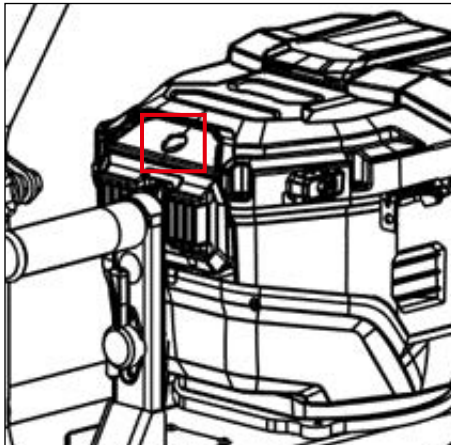


Fig. 2-8 motor switch

The illuminated motor switch has the following modes (see Table 2-2 on page 12).

Tab. 2-2 Modi motor switch

Modes	Description
Green (continuous light)	The battery-operated motor is switched on and ready for operation.
off	The battery-operated motor is switched off.

2.5.6 Operating hours counter

The Profile grinder GP 3600 +S is equipped with an operating hours counter, which monitors the which monitors the operating time for the timely completion of maintenance tasks (see Figure 2-4 on page 10).

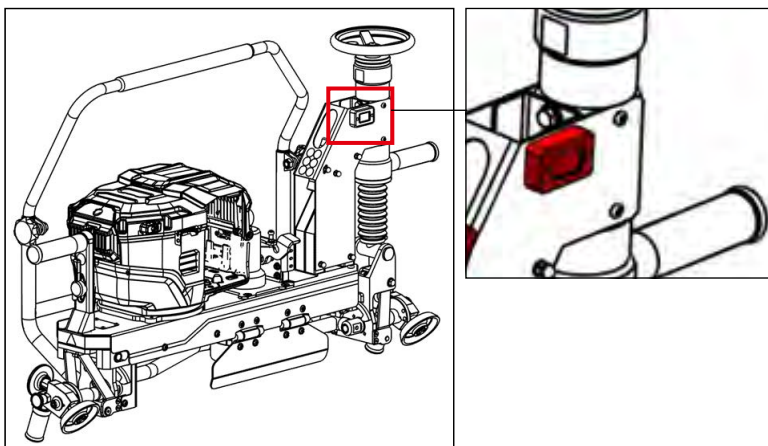


Fig. 2-9 Operating hours counter

2.5.7 LED light

The Profile grinder GP 3600 +S is equipped with an LED light, whcih illuminates the grinding area (see Figure 2-4 on page 10).

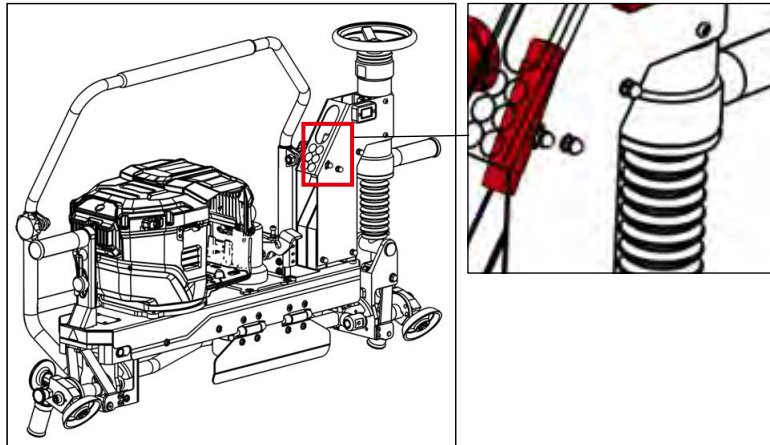


Fig. 2-10 LED light

2.5.8 Stand

The Profile grinder GP 3600 +S is equipped with a stand, which is used to park the machine without removing it from the track (see Figure 2-4 on page 10).

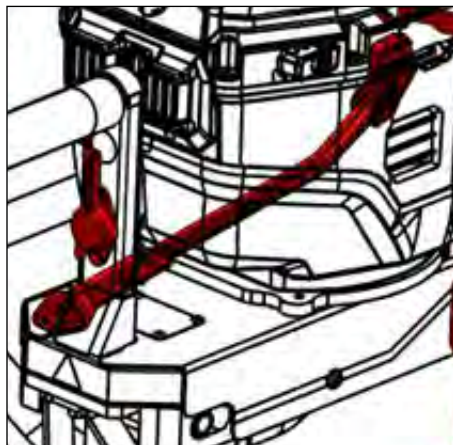


Fig. 2-11 Stand

2.5.9 Bowden cable lever

The Profile grinder GP 3600 +S is equipped with a Bowden cable lever, which is used to stop the motor (see Figure 2-4 on page 10).

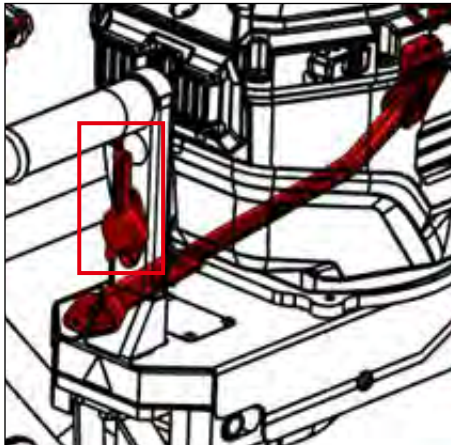


Fig. 2-12 Bowden cable lever

2.5.10 Foot pedal

The Profile grinder GP 3600 +S It is equipped with a foot pedal, which is used for tilting the machine, to enable the grinding of the driving edge and the outer edge. In this way, the machine can tilt around the rail head. (please refer to Figure 2-4 on page 10).

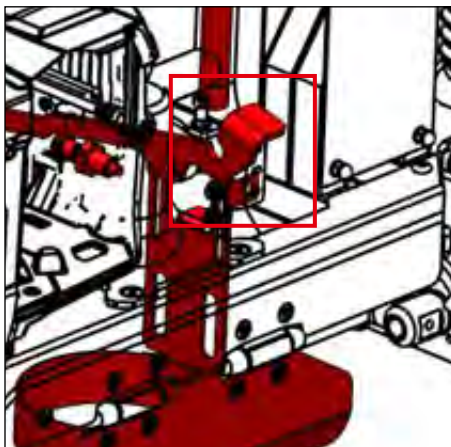
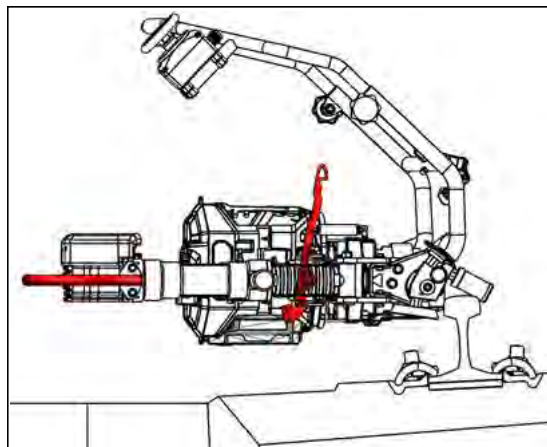


Fig. 2-13 Foot pedal



2.6 Colours and safety labels

2.6.1 Colouring

Table 2-3 on page 14 lists the colours for the various Profile grinding machine GP 3600 +S components:

Tab. 2-3 Colouring GP 3600 +S

Colour name / RAL code	Components
Jet black (RAL 9005)	Handles, setting dial

Tab. 2-3 **Colouring GP 3600 +S <continued>**

Colour name / RAL code	Components
Traffic grey (RAL 7043)	Rupture protection
Gray aluminum (RAL 9007)	Handlebar, guide roller, handwheel
Golden yellow (RAL 1004)	Frame

2.6.2 Safety labels

NOTICE

If safety labels are damaged or go missing at any point in the machine's service life, the operating company must ensure that they are replaced properly. Make sure to check that the safety labels are in place and in good condition on a regular basis.

Auf dem Rahmen der Profile grinding machine GP 3600 +S sind die in Figure 2-14 on page 16 dargestellten Gebots- und Warnzeichen zu finden.

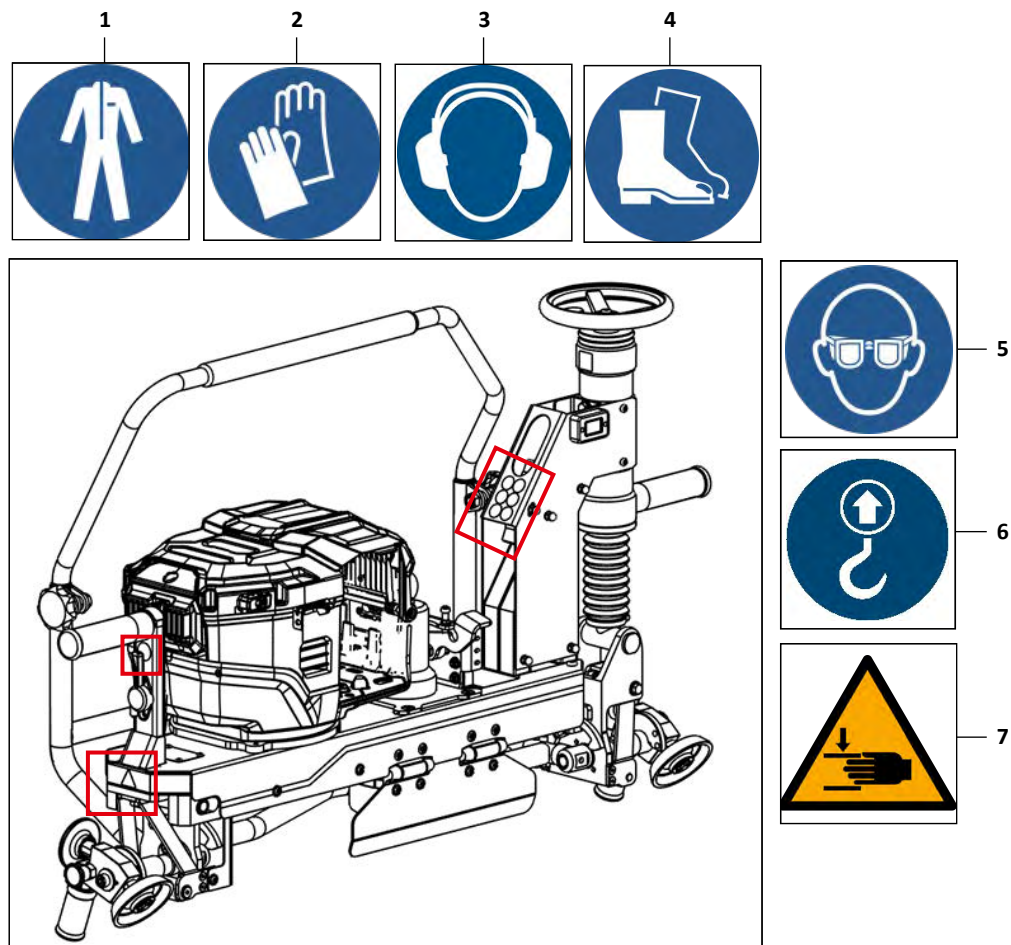


Fig. 2-14 Safety labels (battery compartment)

- | | |
|--|---|
| 1 Mandatory action: wear protective clothing | 5 Mandatory action: Wear safety eyewear |
| 2 Mandatory action: wear work gloves | 6 Mandatory action: Lifting point |
| 3 Mandatory action: Wear hearing protection | 7 Crush hazard warning label |
| 4 Mandatory action: wear safety footwear | |

2.7 Safety systems

The following guards and safety devices are installed on the machine in order to prevent personal injury and environmental and property damage (please refer to Figure 2-15 on page 17).

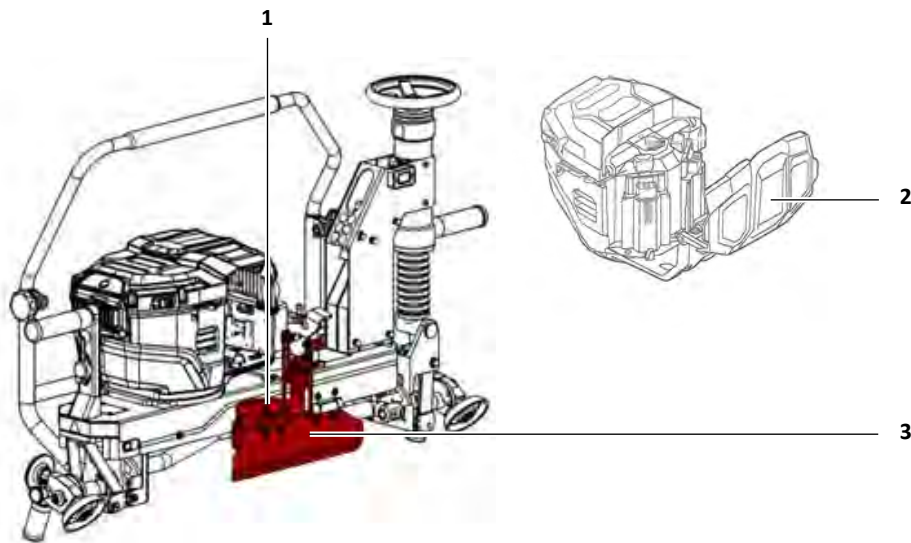


Fig. 2-15 Safety systems

Designation	Description
1 Spark protection	The spark protection helps to prevent sparks from flying when grinding the rail head. Instead, sparks are deflected by the operator and only fly downwards towards the ground to minimise the risk of fire and explosion posed by flying sparks. The spark guard can be folded for grinding the driving edge.
2 Shroud	The purpose of the cover is to protect the EGO Power+ 56V ARC lithium™ batteries.
3 Rupture protection	The Rupture protection shields the grinding head. If the cup grinder gets damaged during the grinding process, the Rupture protection prevents grinding wheel components from getting ejected centrifugally. The Rupture protection is height-adjustable, to compensate for cup grinder wear.

2.8 Hoist

The Profile grinding machine GP 3600 +S is equipped with a lifting device, which ensures safe lifting and carrying. Figure 2-16 on page 18 shows the devices that can be used to carry and lift the machine.

The lifting device is also marked with a 'mandatory action' sign.

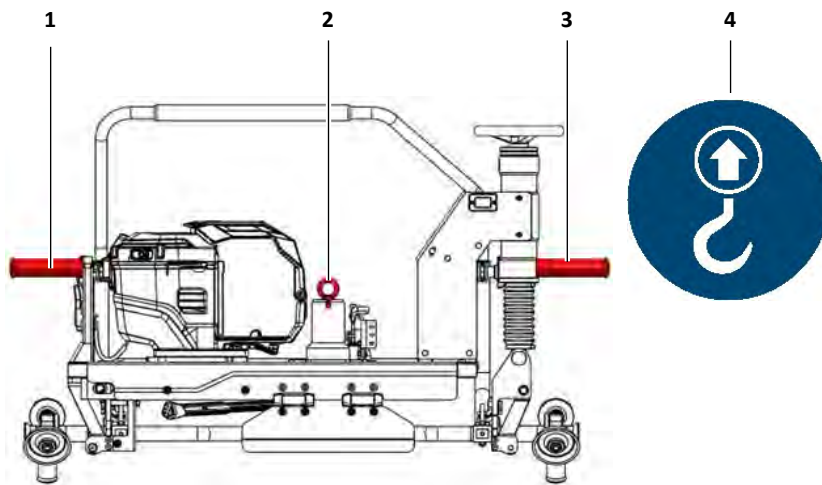


Fig. 2-16 Hoist

1	Handle	3	Handle
2	Lifting eyes	4	Mandatory action: Lifting point

2.9 Fire extinguisher

An operational CO₂ fire extinguisher must always be accessible in the immediate vicinity of the work area.

NOTICE

This fire extinguisher is not included and accordingly is the responsibility of the operating company.

2.10 What to do in case of emergency

If an emergency occurs, turn off the machine immediately and leave the danger zone as quickly as possible.

In the event of personal injury, provide first aid immediately.

In the event of a fire, immediately initiate the required steps for fire-fighting.

2.11 Accessories

NOTICE

Annex D - List of spare parts and accessories on Page V lists additional accessories.

2.11.1 Battery

NOTICE

To operate at full power, the machine needs two rechargeable EGO Power+ 56V ARC lithium™ batteries. If only 1 rechargeable battery is in use, the device only operates at 60% power.

NOTICE

Observe the battery and charger operation manuals provided by EGO when using and charging the batteries!

The batteries are EGO Power+ 56V ARC lithium™ rechargeable batteries (12 Ah).

Each battery features a charge status indicator. The various battery modes are described in Table 2-4 on page 19 below:

Tab. 2-4 Battery LED indicator modes

Modes		Description
Five LEDs light up green (continuous light)		$80\% \leq \text{charge level} \leq 100\%$
Four LEDs light up green (continuous light)		$60\% \leq \text{charge level} < 80\%$
Three LEDs light up green (continuous light)		$40\% \leq \text{charge level} < 60\%$
Two LEDs light up green (continuous light)		$20\% \leq \text{charge level} < 40\%$
One LED lights up green (continuous light)		$10\% \leq \text{charge level} < 20\%$
One LED flashes red		Charge level $< 10\%$
Five LEDs flash red		Low voltage The battery is almost empty and needs to be charged.
Five LEDs light up red (continuous light)		The battery has overheated and needs to cool down.

Tab. 2-4 Battery LED indicator modes <continued>

Modes		Description
No light on any of the LEDs		The rechargeable battery is switched off.

2.11.2 Charger

NOTICE

Observe the battery and charger operation manuals provided by EGO when using and charging the batteries!

To charge the batteries correctly, make sure to use a "700 W RAPID+ Charger CH7000E" charger.

2.12 Optional variant with electronic handwheel

The Profile grinder GP 3600 +S can optionally be equipped with an electronic handwheel (see Figure 2-17 on page 20).

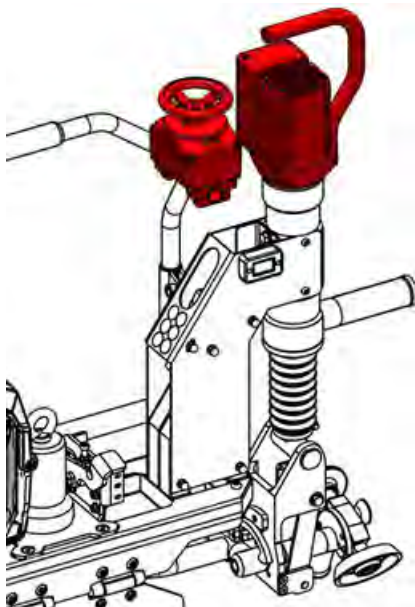


Fig. 2-17 Variant with electronic handwheel

3 COMMISSIONING

Summary

Instructions that explain how to prepare the GP 3600 +S for operation.

NOTICE

If you detect any issues, report them to your supervisor immediately. Do not put the machine back into operation until after these issues have been fixed and you receive approval for operating it again.

The following must be carried out before putting the machine into operation:

1. Check all included contents to make sure they are complete.
If any contents are missing, please contact the customer service team (please refer to Chapter 10 "Customer Service" on page 71).
2. Visually inspect the Profile grinder GP 3600 +S and the batteries for damage (cracks, broken parts, deformation, etc.).
Damaged components and machine parts will need to be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 71).
3. Make sure that the batteries have been inserted correctly (please refer to Chapter 4.2 "Inserting the batteries" on page 24).
4. Check the batteries' charge status (please refer to Table 2-4 in Chapter 2.11.1 "Battery" on page 18).
5. Make sure that the cover of the battery compartment is securely latched.
6. Check the profile grinder for excess soiling.
Remove any excess soiling, especially around the silencer and the starter of the engine (see Chapter 7.4 "Cleaning the GP 3600 +S" on page 48).
7. Check that the spark and Rupture protection is in place.



RISK OF INJURY.

There is a risk of injury posed by parts/particles flying around during grinding.

- The profile grinder must only be operated with a Rupture protection.
- Make sure that the Rupture protection is installed properly.
- Wear the specified personal safety equipment.
- People who are not working on the machine must stay outside the danger zone.
- Check the cup grinder for external damage and make sure to check its expiration date as well.

8. Check the Rupture protection's condition.

Replace the Rupture protection if it is damaged and/or deformed (please refer to Chapter 7.10 "Replacing the cup grinder" on page 60).

9. Check all screw connections to make sure they are secure.

Retighten the screw connections if necessary (please refer to Chapter 7.11 "Checking the screw connections to make sure they are secure" on page 62).

10. Check the cup grinder for correct installation, wear, and a valid expiry date.

A worn-out or expired grinding cup must not be used and must be replaced. (see Chapter 7.10 "Replacing the cup grinder" on page 60).

Rectify the placement of the cup grinder, if it has not been positioned correctly.

4 OPERATION

Summary

Instructions used to explain the main functions of the GP 3600 +S.



DEATH

In thunderstorms, employees may get badly or even fatally injured by lightning strike.

Stop work during thunderstorms.

NOTICE

If you detect any issues, report them to your supervisor immediately. Do not put the machine back into operation until after these issues have been fixed and you receive approval for operating it again.

NOTICE

Wear personal protection equipment.

NOTICE

Do not place the Profile grinder in water or hose it down.

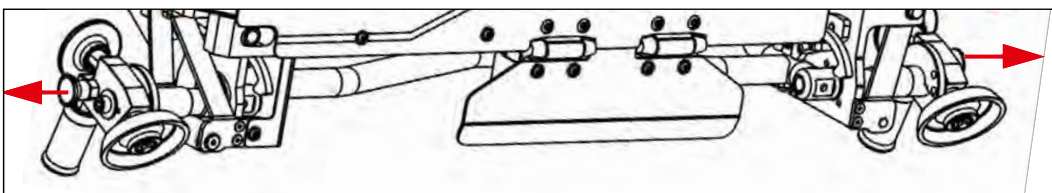
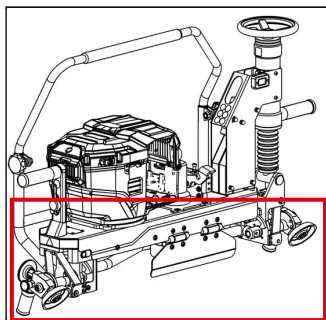
4.1 Setting the rail guide

NOTICE

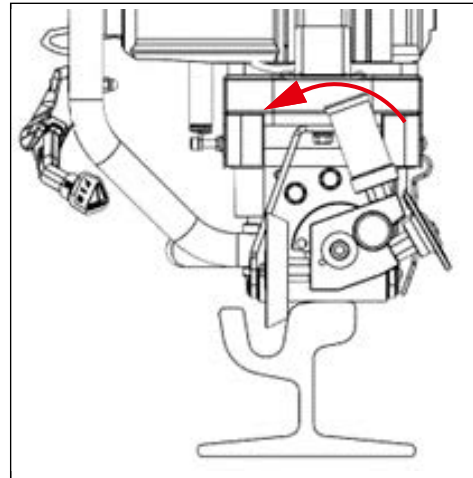
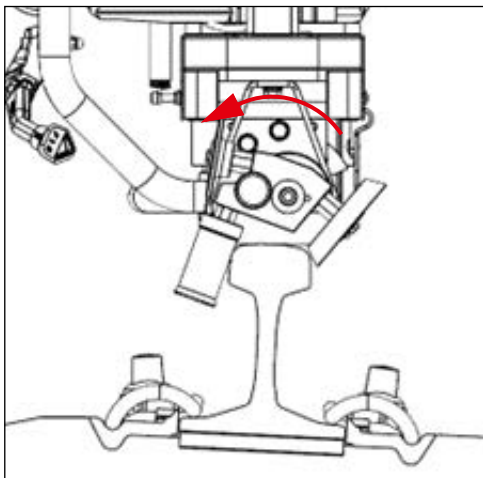
Before this GP 3600 +S can be used on a rail track, the rail guide must be adjusted to the appropriate rail type.

Follow the steps below to adjust the rail guide correctly:

1. Slightly raise the GP 3600 +S on the handle.
2. Pull the arrester pin back and hold it until the rail guide can turn freely.



3. Adjust the rail guide to match the type of rail by turning it.



4. Reinsert the locking pin until it engages at the desired setting..
5. Repeat for the second rail guide.

4.2 Inserting the batteries



WARNING

RISK OF INJURY.

There is a risk of injury due to fire and/or explosion. Damaged batteries and incorrectly handled batteries may behave in an unforeseeable manner, which can result in a fire or explosion and the associated risk of injury.

- Do not, under any circumstance, use any damaged or modified batteries!
- Properly dispose of all damaged batteries!
- Do not expose the batteries to fire or extreme temperatures!
- Follow all charging instructions and make sure to never charge the batteries outside of the temperature range specified in the manual provided by EGO (please refer to the EGO operation manual, Chapter 1.4 "Further applicable documents" on page 4).

NOTICE

Do not, under any circumstance, use damaged batteries.

NOTICE

To operate at full power, the machine needs two rechargeable EGO Power+ 56V ARC lithium™ batteries. If only 1 rechargeable battery is in use, the device only operates at 60% power.

NOTICE

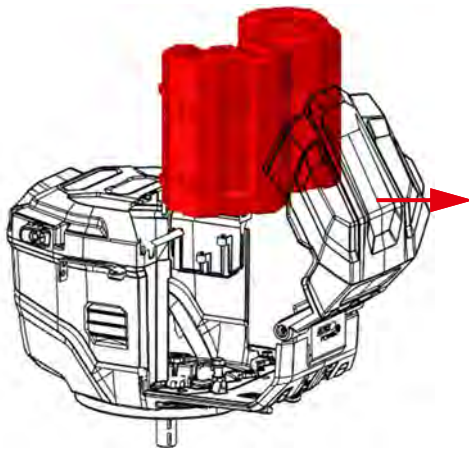
Observe the battery and charger operation manuals provided by EGO when using and charging the batteries!

NOTICE

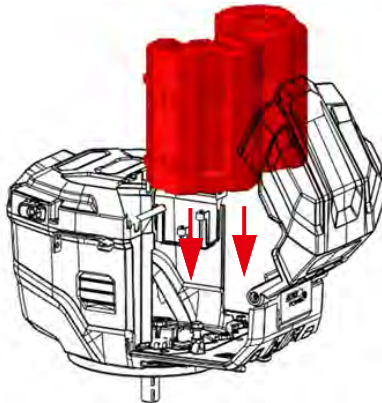
Make sure to only use EGO Power+ 56V ARC lithium™ batteries (two units) or other batteries approved by the manufacturer.

Follow the steps below to insert the batteries correctly:

1. Open the battery compartment cover.



2. Align the rechargeable battery ribs with the connector guide slots in the battery holder and slide the battery all the way into the battery holder.
When the battery has been inserted properly all the way, you will hear it click into place.
Repeat for the second battery.



3. Close the battery compartment cover.

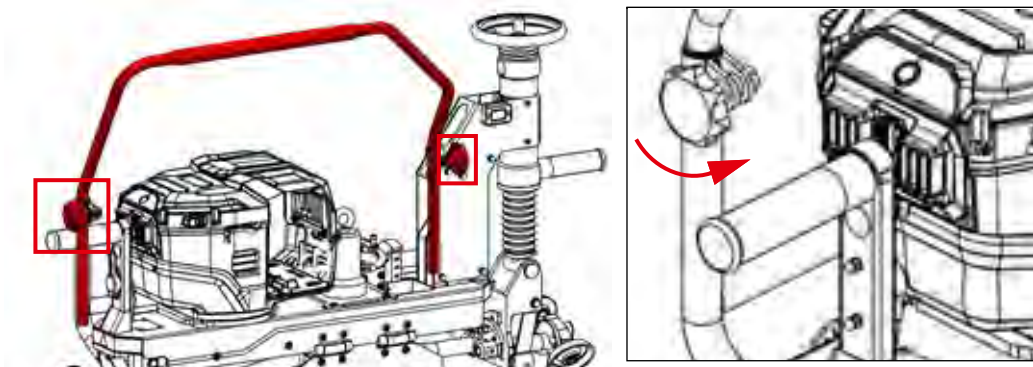
4.3 Adjusting the control arm height

Follow the steps below to adjust the height of the handlebar correctly:

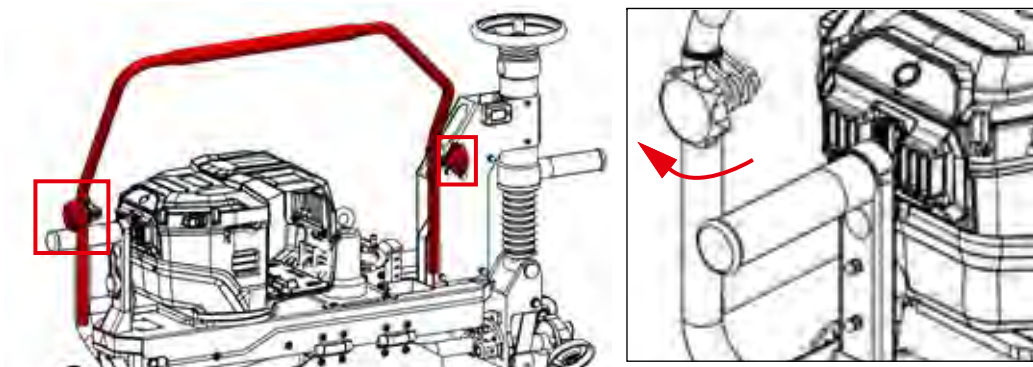
1. Switch off the engine.
For more detailed information, please refer to Chapter 4.8 "Switching off the motor" on page 33.
2. Turn the star knob screw anti-clockwise to loosen it.

NOTICE

Loosen both star knob screws evenly, to avoid torsional stress or blocking of the adjustment mechanism.



3. Adjust the handlebar to the desired height and hold it firmly in position.
Pull the handlebar upwards out of the frame tube to extend it.
Slide the handlebar into the frame tube to shorten it.
4. Turn both of the star knob screws anti-clockwise to tighten them.



4.4 Switching on the motor

NOTICE

You will find details about the engine in the operation manual of the engine manufacturer (see Chapter 1.4 "Further applicable documents" on page 4).

Follow the steps below to remove the motor correctly:

1. Make sure that the batteries are inserted and charged.
For more detailed information, please refer to Chapter 4.2 "Inserting the batteries" on page 24.
2. Ensure that the rail guidance system is adjusted to the corresponding rail profile.
For more detailed information, please refer to Chapter 4.1 "Setting the rail guide" on page 23.
3. Fold in the stand.
4. Correctly position the GP 3600 +S on the rail.

5. Turn the handwheel anti-clockwise until the cup grinder is fully raised and does not touch the rail.

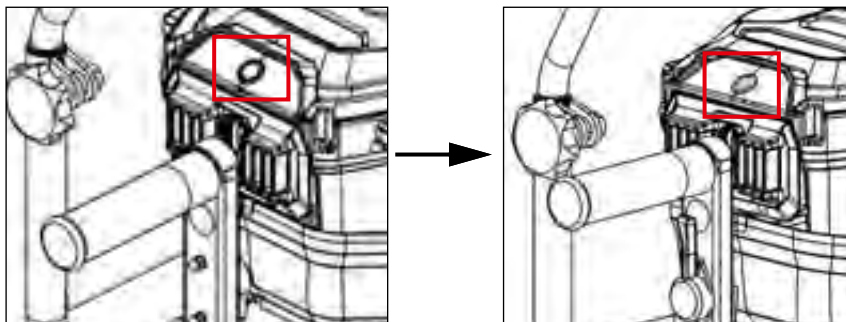


6. Press the motor switch.

When the engine switch has been pressed, it illuminates with a steady green light, signaling that the system is ready for operation.

NOTICE

Make sure that the spring pin for locking the grinding spindle is not latched in.



7. Turn the Bowden cable lever to the right, which corresponds to the 'ON' position.
The cup grinder starts to rotate.

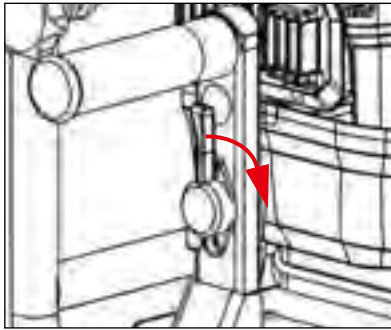


WARNING

RISK OF INJURY.

There is a risk of serious injury from the rotating cup grinder. The rotating cup grinder can cause severe skin abrasions, bruising, broken bones or separation of body parts.

- **Keep your hands and legs away from the rotating cup grinder.**
- **Do not operate the GP 3600 +S without Rupture protection.**
- **People who are not working on the machine must stay outside the danger zone.**
- **Wear the required personal protection equipment.**



4.5 Grinding the running surface



WARNING

HOT SURFACES.

Hot surfaces pose a burn hazard.

The cup grinder and/or the rail may be hot after grinding and result in burns or other irreversible injuries if touched.

- Make sure to always wear all necessary personal protection equipment (especially work gloves).
- Let the components cool down first before changing the cup grinder or carrying out maintenance work.
- Let the rail cool down after welding (below 40° C / 104° F).



WARNING

RISK OF INJURY.

There is a risk of serious injury from the rotating cup grinder.

The rotating cup grinder can cause severe skin abrasions, bruising, broken bones or separation of body parts.

- Keep your hands and legs away from the rotating cup grinder.
- Make sure that the machine is standing firmly.
- Do not operate the GP 3600 +S without Rupture protection.
- Wear the required personal protection equipment.



WARNING

RISK OF INJURY.

Flying sparks pose a risk of injury to operators and other people in the vicinity. Readily flammable objects can combust spontaneously.

- Wear flame-resistant clothes when working.
- Wear appropriate eye protection.
- Remove any highly flammable objects from the vicinity.

**RISK OF INJURY.**

There is a risk of injury posed by parts/particles flying around during grinding.

- The profile grinder must only be operated with a Rupture protection.
- Make sure that the Rupture protection is installed properly.
- Wear the specified personal safety equipment.
- People who are not working on the machine must stay outside the danger zone.
- Check the cup grinder for external damage and make sure to check its expiration date as well.

**HEARING LOSS.**

Noise levels during grinding may result in permanent hearing loss.

Make sure to always wear hearing protection.

Individuals who are not working with or on the grinding machine must stay at a minimum distance of 5 m.

Agree on clear and effective hand signals for communication.

**CRUSH HAZARD.**

There is a risk of injury due to crushing if the operator reaches between the Guide roller and the rail.

- Do not, under any circumstance, reach between the Guide roller and the rail!
- Always wear the required personal protection equipment!

Follow the steps below to grind the running surface correctly:

1. Go through all the preparation steps.

For more detailed information, please refer to Chapter 3 "Commissioning" on page 21.

2. Make sure that the batteries are inserted and charged.

For more detailed information, please refer to Chapter 4.2 "Inserting the batteries" on page 24.

3. Ensure that the rail guidance system is adjusted to the corresponding rail profile.

For more detailed information, please refer to Chapter 4.1 "Setting the rail guide" on page 23.

4. Start the motor.

For more detailed information, please refer to Chapter 4.4 "Switching on the motor" on page 26.

5. Turn the handwheel clockwise until the cup wheel rests on the rail..



6. Move the Profile grinder GP 3600 +S as necessary to grind the rail head.
7. Switch off the motor after completion.
For more detailed information, please refer to Chapter 4.8 "Switching off the motor" on page 33.
8. Unfold the stand and correctly park the GP 3600 +S, so without removing it from the rail.

4.6 Grinding the running edge



WARNING

HOT SURFACES.

Hot surfaces pose a burn hazard.

The cup grinder and/or the rail may be hot after grinding and result in burns or other irreversible injuries if touched.

- Make sure to always wear all necessary personal protection equipment (especially work gloves).
- Let the components cool down first before changing the cup grinder or carrying out maintenance work.
- Let the rail cool down after welding (below 40° C / 104° F).



WARNING

RISK OF INJURY.

There is a risk of serious injury from the rotating cup grinder.

The rotating cup grinder can cause severe skin abrasions, bruising, broken bones or separation of body parts.

- Keep your hands and legs away from the rotating cup grinder.
- Make sure that the machine is standing firmly.
- Do not operate the GP 3600 +S without Rupture protection.
- Wear the required personal protection equipment.



WARNING

RISK OF INJURY.

Flying sparks pose a risk of injury to operators and other people in the vicinity. Readily flammable objects can combust spontaneously.

- Wear flame-resistant clothes when working.
- Wear appropriate eye protection.
- Remove any highly flammable objects from the vicinity.

**WARNING****RISK OF INJURY.**

There is a risk of injury posed by parts/particles flying around during grinding.

- The profile grinder must only be operated with a Rupture protection.
- Make sure that the Rupture protection is installed properly.
- Wear the specified personal safety equipment.
- People who are not working on the machine must stay outside the danger zone.
- Check the cup grinder for external damage and make sure to check its expiration date as well.

**CAUTION****HEARING LOSS.**

Noise levels during grinding may result in permanent hearing loss.

Make sure to always wear hearing protection.

Individuals who are not working with or on the grinding machine must stay at a minimum distance of 5 m.

Agree on clear and effective hand signals for communication.

**CAUTION****CRUSH HAZARD.**

There is a risk of injury due to crushing if the operator reaches between the Guide roller and the rail.

- Do not, under any circumstance, reach between the Guide roller and the rail!
- Always wear the required personal protection equipment!

Follow the steps below to grind the running edge correctly:

1. Go through all the preparation steps.

For more detailed information, please refer to Chapter 3 "Commissioning" on page 21.

2. Make sure that the batteries are inserted and charged.

For more detailed information, please refer to Chapter 4.2 "Inserting the batteries" on page 24.

3. Ensure that the rail guidance system is adjusted to the corresponding rail profile.

For more detailed information, please refer to Chapter 4.1 "Setting the rail guide" on page 23.

4. Start the motor.

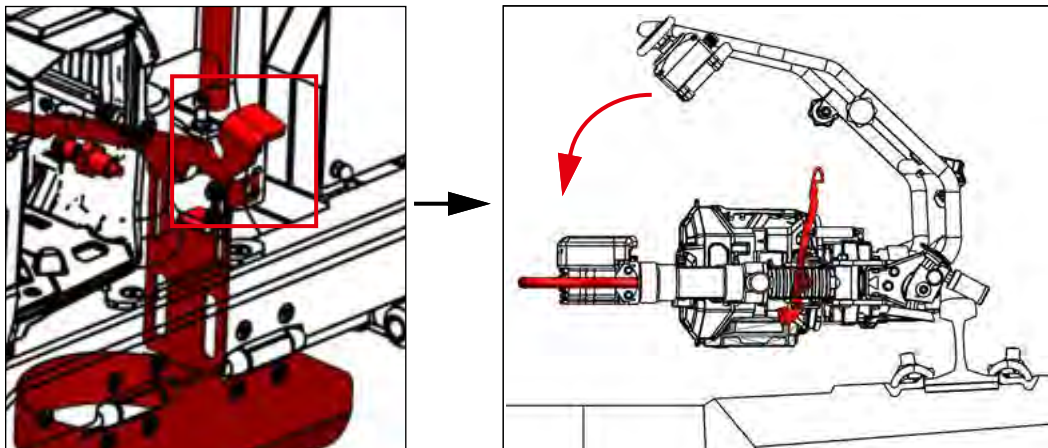
For more detailed information, please refer to Chapter 4.4 "Switching on the motor" on page 26.

5. Fold out the handlebar to grind the driving edge and the outer edge:

Hold the GP 3600 +S firmly by the handlebar.

Using the foot pedal, step on the arrester hook to loosen it.

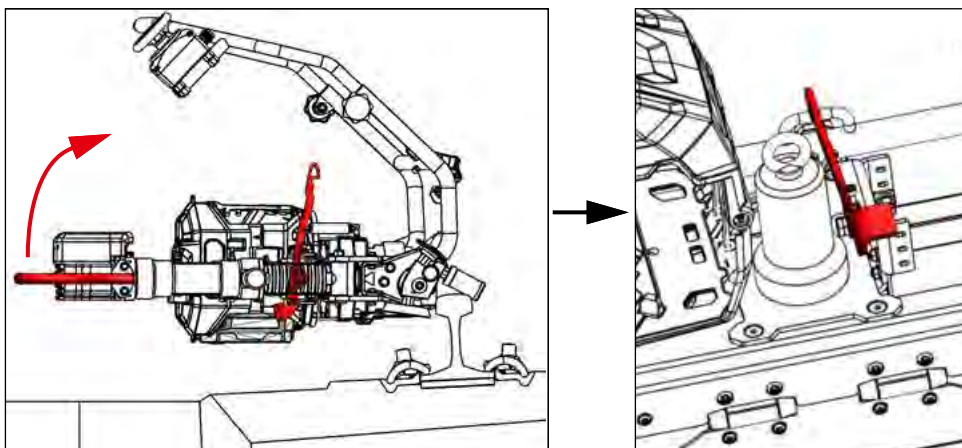
Tilt the GP 3600 +S to the operator side.



6. Turn the handwheel clockwise until the cup wheel rests on the rail..



7. Move the Profile grinder GP 3600 +S as necessary to grind the rail head.
8. Switch off the motor after completion.
- For more detailed information, please refer to Chapter 4.8 "Switching off the motor" on page 33.
9. Fold the handlebar back to the starting position:
Pull the handle above the stepper motor and swivel the GP 3600 +S upwards until the arrester hook engages in the arrester tube again.



10. Unfold the stand and correctly park the GP 3600 +S, so without removing it from the rail.

4.7 Adjusting the speed

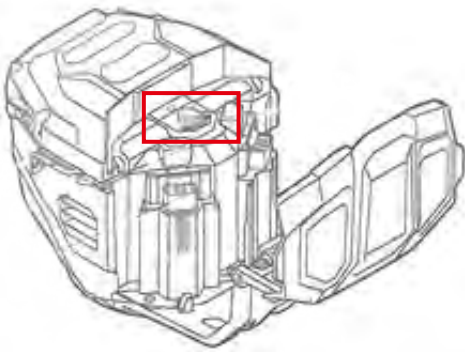
Follow the steps below to adjust the machine's speed correctly:

1. Move the Adjustment lever on the drive motor to the position you want in order to adjust the speed.

The position indicator shows the speed you have set.

The "TURBO" position marks the fastest possible speed.

The "ECO" position marks the slowest possible speed.



4.8 Switching off the motor

NOTICE

You will find details about the engine in the operation manual of the engine manufacturer (see Chapter 1.4 "Further applicable documents" on page 4).

Follow the steps below to switch off the motor correctly:

1. Turn the Bowden cable lever downwards, which corresponds to the 'ON' position.

The cup grinder is stationary.

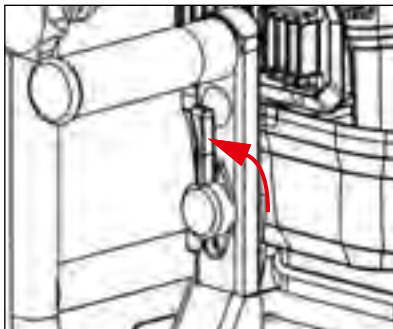


WARNING

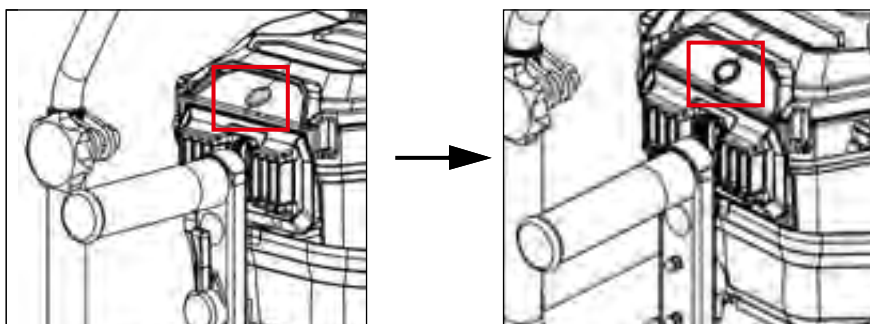
RISK OF INJURY.

There is a risk of serious injury from the rotating cup grinder. The rotating cup grinder can cause severe skin abrasions, bruising, broken bones or separation of body parts.

- Keep your hands and legs away from the rotating cup grinder.
- Make sure that the machine is standing firmly.
- Do not operate the GP 3600 +S without Rupture protection.
- Wear the required personal protection equipment.



2. Press the motor switch until the green continuous light illuminates.



4.9 Removing the batteries



WARNING

RISK OF INJURY.

There is a risk of injury due to fire and/or explosion.

Damaged batteries and incorrectly handled batteries may behave in an unforeseeable manner, which can result in a fire or explosion and the associated risk of injury.

- Do not, under any circumstance, use any damaged or modified batteries!
- Properly dispose of all damaged batteries!
- Do not expose the batteries to fire or extreme temperatures!
- Follow all charging instructions and make sure to never charge the batteries outside of the temperature range specified in the manual provided by EGO (please refer to the EGO operation manual, Chapter 1.4 "Further applicable documents" on page 4).

NOTICE

Do not, under any circumstance, use damaged batteries.

NOTICE

To operate at full power, the machine needs two rechargeable EGO Power+ 56V ARC lithium™ batteries. If only 1 rechargeable battery is in use, the device only operates at 60% power.

NOTICE

Observe the battery and charger operation manuals provided by EGO when using and charging the batteries!

NOTICE

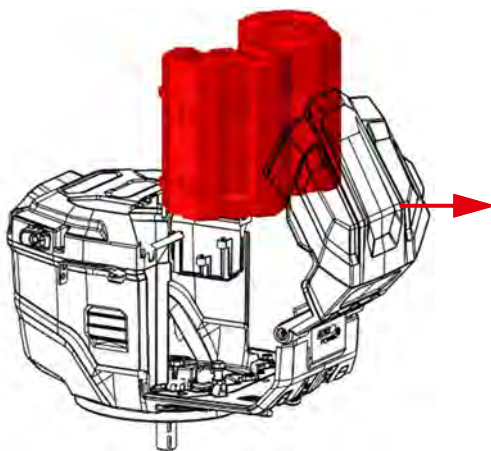
Make sure to only use EGO Power+ 56V ARC lithium™ batteries (two units) or other batteries approved by the manufacturer.

Follow the steps below to remove the batteries correctly:

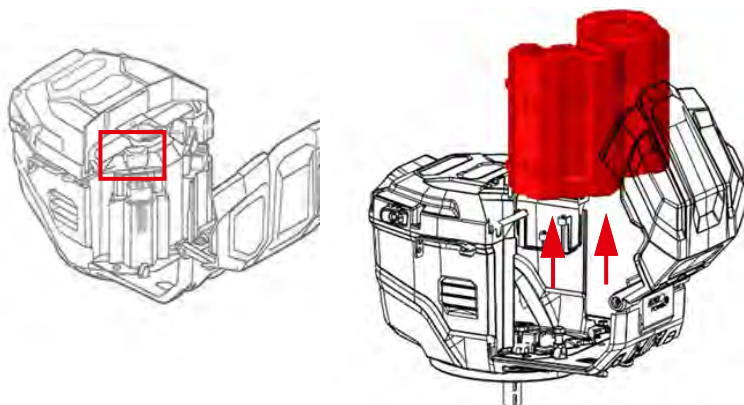
1. Switch off the engine.

For more detailed information, please refer to Chapter 4.8 "Switching off the motor" on page 33.

2. Open the battery compartment cover.



3. Press the battery release button down and pull the battery upwards and out of its holder. Repeat for the second battery.



4. Close the battery compartment cover.

5 DECOMMISSIONING

Summary

Instructions used to explain how to shut down the GP 3600 +S as preparation for maintenance, transportation, or storage.

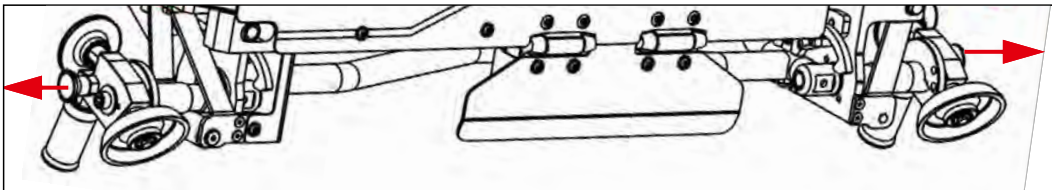
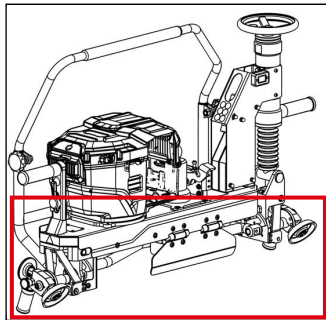
Follow the steps below in order to shut down the machine properly.

1. Switch off the engine.

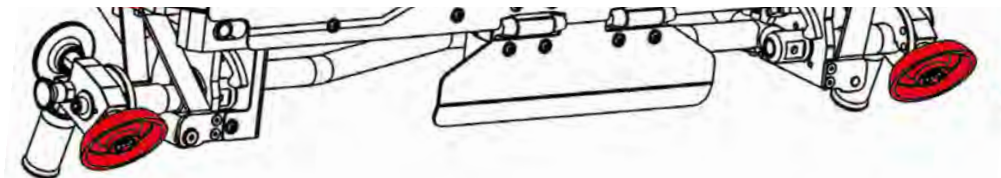
For more detailed information, please refer to Chapter 4.8 "Switching off the motor" on page 33.

2. Fold in the stand.

3. Pull the arrester pin back and hold it until the rail guide can turn freely.



4. Adjust the rail guide by turning it so that the transport roller can be used.



5. Reinsert the locking pin until it engages at the desired setting..

6. Repeat for the second rail guide.

7. Remove the batteries.

For more detailed information, please refer to Chapter 4.9 "Removing the batteries" on page 34.

8. Remove the Profile grinder GP 3600 +S from the rail.



CAUTION

CRUSH HAZARD.

There is a crush hazard when removing the machine from the rail.

Do not, under any circumstance, reach between the rail and the Battery-powered profile grinder GP 3600 +S.

To remove the machine from the rail, use the handles intended for that purpose.



CAUTION

RISK OF INJURY.

There is a risk of injury posed by the machine's weight.

The profile grinder weighs 50 kg / 110 lbs without batteries.

There is a risk of injury when the machine is being transported.

- Carrying the profile grinder is mandated as a two-person job.
- Only use the handles and the transport roller to carry it,
- Use the lifting eyes for longer transport routes.
- Always wear work gloves in protection class S3.

NOTICE

Make absolutely sure that the cup grinder has stopped before removing the grinding machine from the rail.

6 FAULT, CAUSE AND ELIMINATION

Summary

Identifying problems and fixing them.



WARNING

RISK OF INJURY.

There is a risk of injury posed by repairs that are not carried out correctly.

Repairs to the profile grinder must be carried out exclusively by Elektro-Thermit GmbH & Co. KG or specially trained personnel.

- Work on electrical system components must be carried out exclusively by qualified electricians.
- Parts and components must be replaced exclusively with identical spare parts. When replacing a component, make absolutely sure to observe all the component manufacturer's instructions and specifications.

NOTICE

All maintenance, servicing, and inspection work must be carried out exclusively by trained specialised personnel.

NOTICE

Wear the required personal protection equipment.

NOTICE

If necessary, contact the customer service team (please refer to Chapter 10 "Customer Service" on page 71) in order to get information for maintenance steps or repairs.

The following Table 6-1 on page 38 lists potential problems, their cause, and how to fix them.

FCE 6-1 Fault, cause and elimination

Fault	Cause	Elimination
One battery LED flashes red 	Charge level < 10%	1. Charge the battery with a compatible charger.
Five battery LEDs flash red 	The battery is almost empty and needs to be charged immediately.	

FCE 6-1 Fault, cause and elimination <continued>

Fault	Cause	Elimination
Five battery LEDs light up red (solid light) 	Battery overheating	1. Let the battery cool down.
Wobbling, abnormal vibrations, and/or noise	Problems with the grinding drive's concentricity	1. Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36). 2. Check the grinding wheel for damage. Damaged grinding wheels must be replaced. 3. Replace the grinding wheel if damaged (see Chapter 7.10 "Replacing the cup grinder" on page 60).
Motor switch illuminates continuously in orange.	Drive unit has overheated	1. Clean the air filter. For more detailed information, please refer to Chapter 7.7 "Checking and cleaning the air filter" on page 52 2. Reduce the load and/or do not operate the GP 3600 +S at high temperatures.
Motor switch flashes in orange.	Overload	1. Reduce the load.
Motor switch flashes alternately in red/green.	Communication problem	1. Contact the customer service team. For more detailed information, please refer to Chapter 10 "Customer Service" on page 71.
Motor switch flashes in red.	Low voltage	1. Charge the battery with a compatible charger (please refer to the operation manual provided by EGO).

FCE 6-1 **Fault, cause and elimination** <continued>

Fault	Cause	Elimination
Handwheel with impaired movement	Delivery contamination	1. Unfasten the gaiter. 2. Clean the parts below it. 3. Grease the sliding seats. For more detailed information, please refer to Chapter 7.5 "Detaching the gaiter and cleaning the parts (handwheel)" on page 49.
It is not possible to adjust the height of the handlebar.	Control arm handle is now at an angle in the frame tube and has become wedged	1. Align the handlebars parallel to the frame tube. For more detailed information, please refer to Chapter 4.3 "Adjusting the control arm height" on page 25.
Profile grinder vibrates too strongly.	Imbalance on the cup grinder	1. Replace the cup grinder. For more detailed information, please refer to Chapter 7.10 "Replacing the cup grinder" on page 60.
	Tipping device catch hook has too much play on the arrester tube	1. Retension the catch hook using the setting screw.

FCE 6-1 Fault, cause and elimination <continued>

Fault	Cause	Elimination
It is not possible to switch on the profile grinder.	No batteries have been inserted	1. Check to make sure that you have inserted the batteries. 2. Insert the batteries (please refer to Chapter 4.2 "Inserting the batteries" on page 24). 3. Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).
	Batteries not inserted correctly	1. Check to make sure that the battery or batteries have been inserted all the way. 2. Insert the battery or batteries properly. Align the battery ribs with the connector guide slots and slide the battery all the way into the battery holder. When the battery has been inserted properly all the way, you will hear it click into place. Repeat for the second battery. 3. Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).
	The battery is flat	1. Charge the battery with a compatible charger (please refer to the operation manual provided by EGO).

7 MAINTENANCE AND CARE

Summary

Overview of maintenance and repair tasks and the materials required for them, as well as instructions on how to carry them out.



RISK OF INJURY.

There is a risk of injury

Operating and maintenance personnel must have the required qualifications and be able to carry out the respective tasks reliably.

- The manager in question must define the corresponding personnel's responsibilities and supervision in detail.
- Everyone carrying out work on the machine must have received detailed briefing before that. This briefing must be documented in writing.
- The operations manager in question must make sure that all personnel has fully understood the contents of the operation and maintenance manuals.



RISK OF INJURY.

Improper or delayed maintenance poses a risk of injury to the operator and leads to damage to the profile grinder.

- Remove all batteries before carrying out any maintenance work.
- Maintenance intervals are to be determined by the operator as part of the risk assessment.
- Observe the manufacturer's maintenance intervals and instructions, as well as all applicable guidelines.
- Parts and components must be replaced exclusively with identical spare parts. When replacing a component, make absolutely sure to observe all the component manufacturer's instructions and specifications.



RISK OF INJURY.

There is a risk of injury posed by repairs that are not carried out correctly.

Repairs to the profile grinder must be carried out exclusively by Elektro-Thermit GmbH & Co. KG or specially trained personnel.

- Work on electrical system components must be carried out exclusively by qualified electricians.
- Parts and components must be replaced exclusively with identical spare parts. When replacing a component, make absolutely sure to observe all the component manufacturer's instructions and specifications.

**RISK OF INJURY.**

There is a risk of serious injury if the operator touches the rotating cup grinder or reaches between the cup grinder and the Rupture protection.

- Keep your hands and legs away from the rotating cup grinder.
- Do not operate the profile grinder without Rupture protection.
- Remove all batteries before replacing the grinding wheel or carrying out any maintenance work.
- People who are not working on the profile grinder must stay outside the danger zone.
- Always wear the required personal protection equipment!

**RISK OF INJURY.**

Risk of injury from projectile gravel and dust when cleaning the air filter

Working with compressed air entails the risk of dust particles and splinters getting into the eyes. This can injure them or may even cause blindness.

Always wear safety goggles when working with compressed air and in the vicinity of others working with it.

**RISK OF INJURY.**

Putting the machine back into operation intentionally and/or accidentally may result in injury.

Remove the battery to make sure that the GP 3600 +S Profile grinder cannot be put back into operation intentionally or accidentally during maintenance and repair work.



Environmentally hazardous substances must be properly disposed of in compliance with all applicable requirements and regulations.

Make sure to observe the manufacturer's data sheets and safety data sheets.

For more detailed information, please refer to Chapter 9 "Disposal" on page 69.

NOTICE

All maintenance, servicing, and inspection work must be carried out exclusively by trained specialised personnel (please refer to Chapter 1.3 "Requirements for operators" on page 1).

NOTICE

Wear the required personal protection equipment (please refer to Chapter 1.3.3 "Personal protection equipment" on page 3).

NOTICE

Damage, unusual noises, overheating, and/or vibrations are all things you should be on the lookout for.

NOTICE

Proper and timely maintenance will lengthen the machine's service life, ensure availability, and help prevent unwanted downtimes. The recommended maintenance intervals must be observed.

NOTICE

The components in the profile grinder are subject to various maintenance intervals that depend on how the machine is used.

These maintenance intervals must be determined by the company operating the machine as part of the corresponding hazard and risk assessments. Observe the requirements in all applicable guidelines.

NOTICE

The operating company must document all maintenance.

NOTICE

Use genuine spare parts and suitable tools exclusively.

7.1 Maintenance schedule

The maintenance schedule shows the interval at which maintenance tasks must be carried out while taking into account specific maintenance steps (please refer to Table 7-1 on page 45).

Tab. 7-1 Maintenance schedule

Maintenance task	Interval						
	before every entry into service	daily / after the end of each shift/ every 10 operating hours	every 40 operating hours	every 50 operating hours	every 80 operating hours	every 100 operating hours	As necessary
Visual inspection of the GP 3600 +S	X	X					X
Visual inspection and condition check Safety labels and rating plate						X	X
Cleaning the GP 3600 +S		X					X
Detaching the gaiter and cleaning the parts (handwheel)							X
Checking and cleaning the air filter		X					X
Changing the air filter				X			X
Replacing the V-belt							
Replacing the cup grinder							X
Checking the screw connections to make sure they are secure					X		X
Initial check after 16 operating hours!							

7.2 Visual inspection of the GP 3600 +S

Ambient conditions

No special ambient conditions need to be observed.

Personnel

Specialised personnel

Tools and materials

-

Maintenance 7-1 Visual inspection

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	
2. Visual inspection of general condition 2- 001 Carry out a visual inspection checking for excessive dirt, foreign bodies, damage, cracks, broken parts, and dents. Damaged components must not be put into operation and must be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 71). Heavy contamination must be cleaned up (see Chapter 7.4 "Cleaning the GP 3600 +S" on page 48). Foreign bodies must be removed. 2- 002 Carry out a visual inspection of the cup grinder. Damaged and worn out cup grinders must not be put into operation and must be replaced. Please refer to Chapter 7.10 "Replacing the cup grinder" on page 60). 2- 003 Check the cup grinder's expiration date. Expired cup grinders must not be put into operation and must be replaced. Please refer to Chapter 7.10 "Replacing the cup grinder" on page 60). 2- 004 Check the Rupture protection for correct positioning, damage and/or wear. A damaged or missing Rupture protection must not be put into operation and must be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 71).	
3. Switch on the device 3- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	

7.4 Cleaning the GP 3600 +S



WARNING

RISK OF INJURY.

There is a risk of metal swarf causing eye injuries when removing impurities with compressed air.

Make sure to wear safety eyewear and protective clothing during cleaning work.

NOTICE

The machine must be cleaned at the end of each shift every time it is used.

NOTICE

Do not place the Profile grinder in water or hose it down.

Ambient conditions

No special ambient conditions need to be observed.

Personnel

Specialised personnel

Tools and materials	Quantity
Cleaning cloth (lint-free)	1
Blow gun	1

Maintenance 7-3 Cleaning

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	-
2. Cleaning 2- 001 Remove grinding dust with a blow gun at a distance of 30 cm every time after you use the machine. 2- 002 Remove excessive dirt with an appropriate cleaning cloth.	Blow gun Cleansing tissue
 Observe the following when cleaning the machine: • Do not, under any circumstance, let water get on or in the motor, • Do not, under any circumstance, use combustible and/or highly flammable cleaning agents. • Make sure that there are no paper residues and/or cleaning cloths left on the motor.	

Maintenance 7-3 Cleaning <continued>

Maintenance steps	Tools / materials
3. Switch on the device 3- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	

7.5 Detaching the gaiter and cleaning the parts (handwheel)

Ambient conditions
No special ambient conditions need to be observed.

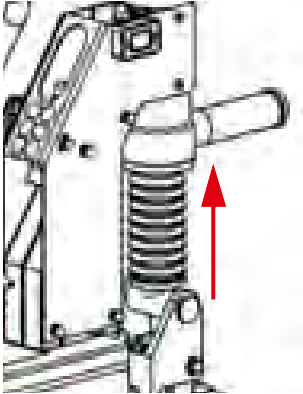
Personnel
Specialised personnel

Tools and materials
Brake cleaner Screwdriver Graphite grease Cleaning cloth (lint-free)

Maintenance 7-4 Detaching the gaiter and cleaning the parts

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	-
2. Unfastening the gaiter	

Maintenance 7-4 Detaching the gaiter and cleaning the parts <continued>

Maintenance steps	Tools / materials
2- 001 Loosen the M5 slotted screw by turning it anti-clockwise, thereby opening the hose clamp. 2- 002 Push the gaiter upwards. 	Screwdriver
3. Cleaning and greasing the parts 3- 001 Clean the parts. 3- 002 Grease the sliding seats.	- Brake cleaner, cleaning cloth, graphite grease
Environmentally hazardous substances must be properly disposed of in compliance with all applicable requirements and regulations. Make sure to observe the manufacturer's data sheets and safety data sheets. For more detailed information, please refer to Chapter 9 "Disposal" on page 69.	
4. Attaching the gaiter 4- 001 Push the gaiter downwards. 4- 002 Tighten the M5 slotted screw by turning it clockwise, thereby closing the hose clamp.	Screwdriver
5. Switch on the device 5- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	-

7.6 Setting the Rupture protection (height)

 **CAUTION**

RISK OF INJURY.

Unintentional commissioning can lead to injuries..

When adjusting the rupture protection, the machine needs to be switched off and protected to prevent it from being switched back on accidentally.

Remove the batteries (please refer to Chapter 4.9 "Removing the batteries" on page 34).

NOTICE

For safety reasons, the rupture protection always needs to be adjusted in its lowest position manually to permit the current height of the cup grinder.

NOTICE

The height of the rupture protection can be adjusted to reflect the extent of wear on the cup grinder.

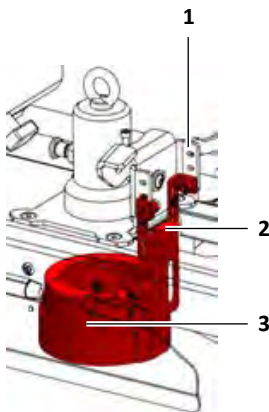
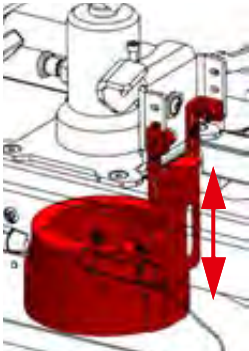


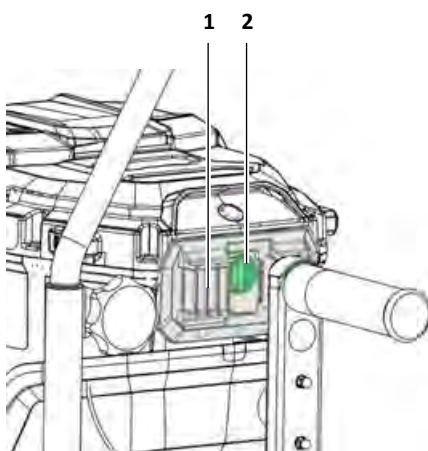
Fig. 7-1 Rupture protection setting

1	Engagement positions	2	Grip tab	3	Cup grinder
---	----------------------	---	----------	---	-------------

Ambient conditions
No special ambient conditions need to be observed.
Personnel
Specialised personnel
Tools and materials
-

Maintenance 7-5 Setting the Rupture protection (height)

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	-
2. Rupture protection setting 2- 001 Pull the grip tab upwards or push it downwards to set the desired position. The Rupture protection then engages automatically in one of three predefined positions. 	
3. Switch on the device 3- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	-

7.7 Checking and cleaning the air filter**Fig. 7-2 Air filter**

1 Magnets	2 Air filter cap
-----------	------------------

Ambient conditions

No special ambient conditions need to be observed.

Personnel

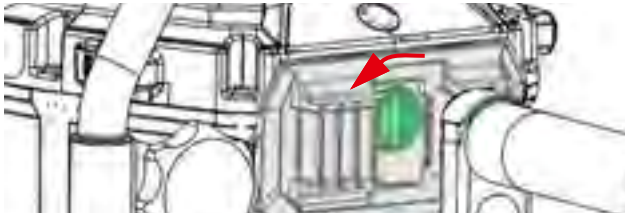
Specialised personnel

Tools and materials**Quantity**

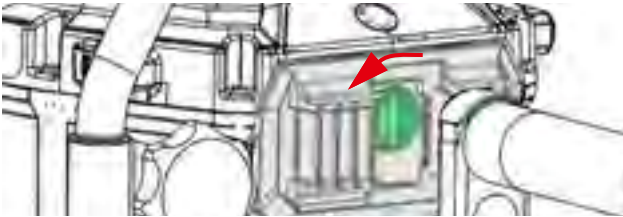
Blow gun

1

Maintenance 7-6 Checking and cleaning the air filter

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	-
2. Opening the air filter 2- 001 Turn the green air filter cover anti-clockwise and remove the air filter housing.. 	
3. Checking and cleaning	

Maintenance 7-6 Checking and cleaning the air filter <continued>

Maintenance steps	Tools / materials
3- 001 Remove the air filter insert from the air filter housing.. 3- 002 Check the air filter insert for damage. Replace a damaged and/or excessively dirty air filter insert. (see Chapter 7.8 "Changing the air filter" on page 55). 3- 003 Carefully clean the magnets of adhering grinding dust using a blow gun.. Using a blow gun, blow out the air filter insert several times from the air filter housing end through the filter insert. Hold the blow gun at a distance of 30 cm from the cover, and make sure that the compressed air does not exceed 207 kPa (2.1 kg/cm²)  3- 004 Insert the air filter insert in the air filter housing.	Blow gun
4. Closing the air filter 4- 001 Press the green air filter cover in slightly and turn it clockwise to lock the air filter cover.. 	
5. Switch on the device 5- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	-

7.8 Changing the air filter

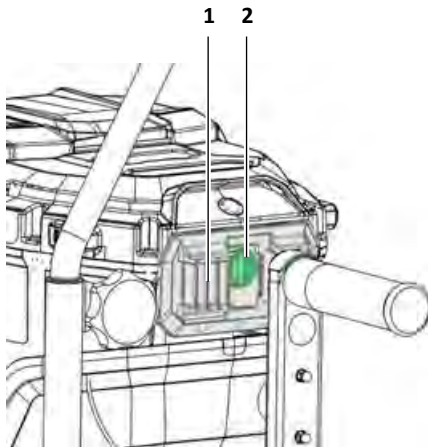


Fig. 7-3 Air filter

1 Magnets	2 Air filter cap
-----------	------------------

Ambient conditions

No special ambient conditions need to be observed.

Personnel

Specialised personnel

Tools and materials

Quantity

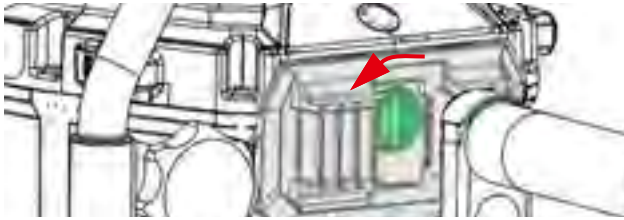
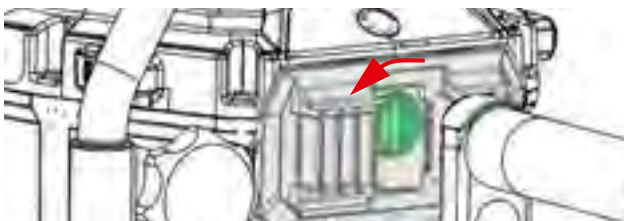
Air filter insert

1

Maintenance 7-7 Changing the air filter

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	-
2. Opening the air filter	

Maintenance 7-7 Changing the air filter <continued>

Maintenance steps	Tools / materials
2- 001 Turn the green air filter cover anti-clockwise and remove the air filter housing.. 	
3. Changing the air filter 3- 001 Remove the air filter insert from the air filter housing. Correctly dispose of the air filter insert (see Chapter 9 "Disposal" on page 69). 3- 002 Insert the new air filter insert in the air filter housing. Correctly dispose of the packaging material (see Chapter 9 "Disposal" on page 69)	Air filter insert
4. Closing the air filter 4- 001 Press the green air filter cover in slightly and turn it clockwise to lock the air filter cover. 	
5. Switch on the device 5- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	-

7.9 Replacing the V-belt

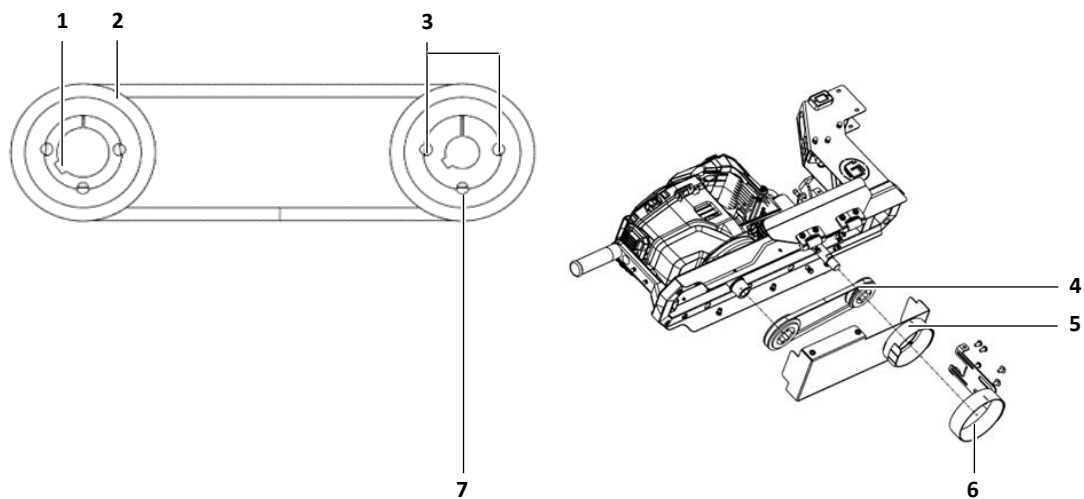


Fig. 7-4 V-belt drive

1	Tapered bush	4	V-belt pulley	7	Extractor bore
2	V-belt pulley	5	Engine pulley cover		
3	Opposing boreholes	6	Rupture protection		

Ambient conditions
No special ambient conditions need to be observed.

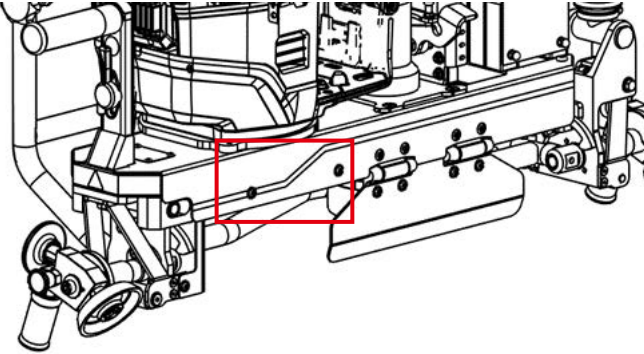
Personnel
Specialised personnel

Tools and materials	Quantity
19 mm open-ended spanner	1
Torque wrench	1
V-belt	1
Screwdriver	1

Maintenance 7-8 Replacing the V-belt

Maintenance steps	Tools / materials
1. Switch off the device	-
1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	
2. Removing the V-belt	

Maintenance 7-8 Replacing the V-belt <continued>

Maintenance steps	Tools / materials
2- 001 Move the GP 3600 +S into a safe horizontal position and set it down. 2- 002 Press spring pin against cup grinder housing and turn the cup grinder until the spring pin engages in the grinding shaft. 2- 003 Keep the spring pin pressed in and use a suitable tool (e.g. ratchet with socket, WAF 30) to release the cup grinder from the grinding shaft by unscrewing it anti-clockwise. 2- 004 Loosen the M6 pan head screws (4 pieces) by turning them anti-clockwise, to disassemble the Rupture protection. 2- 005 Loosen the M6 pan-head screws (2 pieces) by turning them anti-clockwise, to remove the V-belt cover.  2- 006 Remove the V-belt pulley from the grinding shaft. Block the grinding shaft by pressing in the spring pin on the grinding shaft bell. Loosen both threaded rods in the tapered bush and then unscrew them. Screw a threaded dowel into the extractor bore of the tapered bush. Tighten and screw in the threaded dowel until the V-belt pulley slides completely out of the tapered bush.	Screwdriver Screwdriver
3. Replacing the V-belt 3- 001 Remove the old V-belt and correctly dispose of it (see Chapter 9 "Disposal" on page 69). 3- 002 Unwrap the new V-belt and correctly dispose of the packaging (see Chapter 9 "Disposal" on page 69).	V-belt
4. Attaching the V-belt	

Maintenance 7-8 Replacing the V-belt <continued>

Maintenance steps	Tools / materials
4- 001 Fit the V-belt pulley back onto the grinding shaft. Fit the tapered bush and the V-belt pulley together and align them so that all 3 holes are aligned with each other. Screw both threaded dowels into the two opposing bores. Slide the tapered bush and V-belt pulley along the sliding shaft up to the stop. Block the grinding shaft by pressing in the spring pin on the grinding shaft bell. Using a torque wrench, uniformly tighten both threaded dowels to their maximum torque of 20 Nm. 4- 002 Pull out the spring pin to release the grinding shaft. Insert the whole of the new V-belt into the V-belt pulley at the engine end and as far as possible into the V-belt pulley at the grinding shaft end. 4- 003 Turn the grinding shaft clockwise using a 19 mm open-end wrench so that the V-belt is fitted completely. 4- 004 Tighten the M6 pan-head screws (2 pieces) by turning them clockwise, to attach the V-belt cover. 4- 005 Loosen the M6 pan head screws (4 pieces) by turning them anti-clockwise, to disassemble the Rupture protection. 4- 006 Attach the cup grinder and screw it on clockwise until it stops.. 4- 007 Release the spring pin and make sure that the grinding shaft can rotate freely.	Torque wrench 19 mm open-ended spanner Screwdriver Screwdriver
5. Switch on the device 5- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	-

7.10 Replacing the cup grinder



HOT SURFACES.

Hot surfaces pose a burn hazard.

The cup grinder and/or the rail may be hot after grinding and result in burns or other irreversible injuries if touched.

- Make sure to always wear all necessary personal protection equipment (especially work gloves).
- Let the components cool down first before changing the cup grinder or carrying out maintenance work.
- Let the rail cool down after welding (below 40 °C / 104 °F).



RISK OF INJURY.

There is a risk of serious injury from the rotating cup grinder.

The rotating cup grinder can cause severe skin abrasions, bruising, broken bones or separation of body parts.

- Keep your hands and legs away from the rotating cup grinder.
- Before maintenance work, make sure that the cup grinder is at a standstill and that the machine cannot be switched on again unintentionally.
- Do not operate the GP 3600 +S without Rupture protection.
- People who are not working on the machine must stay outside the danger zone.
- Wear the required personal protection equipment.

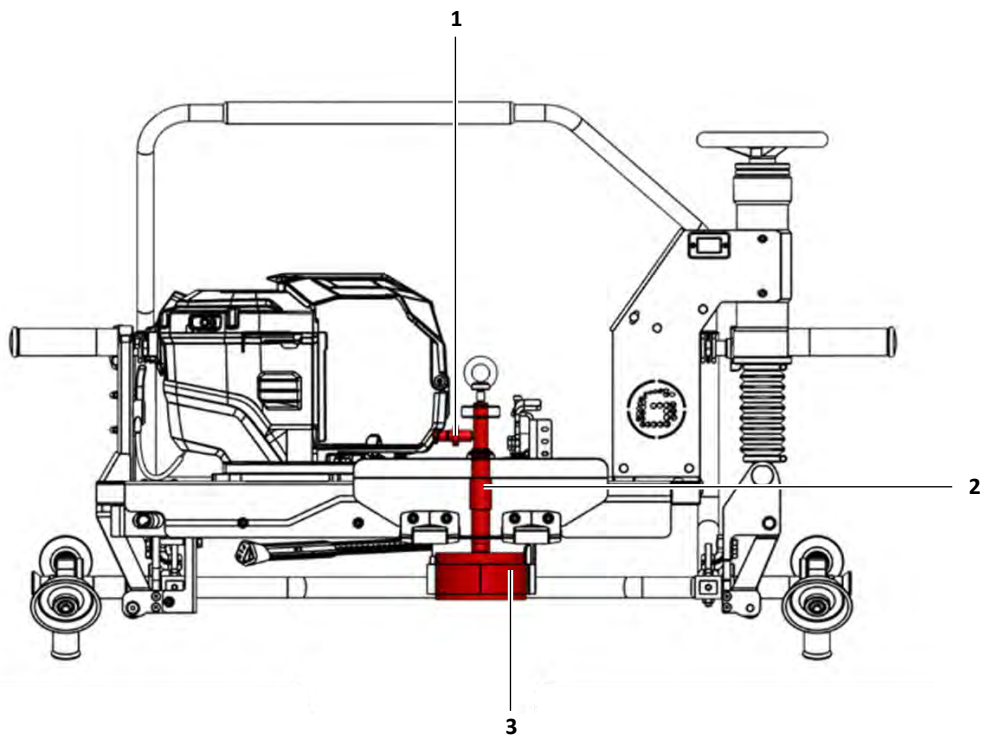


Fig. 7-5 Replacing the cup grinder

1 Grinding shaft	2 Spring pin	3 Cup grinder
------------------	--------------	---------------

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials	Quantity
Ratchet with socket (WAF 30)	1
Cup grinder	1

Maintenance 7-9 Replacing the cup grinder

Maintenance steps	Tools / materials
1. Switch off the device	-
1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	
2. Replacing the cup grinder	

Maintenance 7-9 Replacing the cup grinder <continued>

Maintenance steps	Tools / materials
2- 001 Move the GP 3600 +S into a safe horizontal position and set it down. 2- 002 Press spring pin against cup grinder housing and turn the cup grinder until the spring pin engages in the grinding shaft. 2- 003 Keep the spring pin pressed in and use a suitable tool (e.g. ratchet with socket, WAF 30) to release the cup grinder from the grinding shaft by unscrewing it anti-clockwise. 2- 004 Attach the new cup grinder and screw it on clockwise until it stops.. 2- 005 Release the spring pin and make sure that the grinding shaft can rotate freely.	Cup grinder
3. Switch on the device 3- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	

7.11 Checking the screw connections to make sure they are secure

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials	Quantity
suitable spanner (open-ended/combination spanner)	-

Maintenance 7-10 Checking the screw connections to make sure they are secure

Maintenance steps	Tools / materials
1. Switch off the device 1- 001 Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).	
2. Check the screw connections	

Maintenance 7-10 Checking the screw connections to make sure they are secure <continued>

Maintenance steps	Tools / materials
2- 001 Check all screw connections to make sure they are in place and secure. Replace any missing bolt connections.	
3. Retighten the screw connections 3- 001 Hand-tighten all threaded connections by turning them clockwise with a suitable spanner.	suitable spanner
4. Switch on the device 4- 001 Go through all the preparation steps (please refer to Chapter 3 "Commissioning" on page 21).	

8 TRANSPORTATION AND STORAGE

Summary

Provides information and uses instructions to explain the steps required for transportation, storage, and putting the machine back into operation.

8.1 Transportation of the GP 3600 +S



RISK OF INJURY.

There is a risk of injury posed by the machine's weight. The profile grinder weighs 50 kg / 110 lbs without batteries. There is a risk of injury when the machine is being transported.

- Carrying the profile grinder is mandated as a two-person job.
- Only use the handles and the transport roller to carry it,
- Use the lifting eyes for longer transport routes.
- Always wear work gloves in protection class S3.



RISK OF INJURY.

There is a risk of injury from falling objects during transport using appropriate transport equipment.

- Make sure that the machine is properly hooked onto the lifting eye.
- Secure the machine sufficiently.
- Never stand underneath suspended loads.



RISK OF INJURY.

There is a risk of injury due to tilting/falling over. Bruises or broken bones may result if the machine falls on the hands or feet.

- Always set down the machine so that it cannot topple over.
- Always wear work gloves, safety footwear and protective work clothing when transporting the machine.
- Always use the transport rollers or appropriate lifting gear when lifting and moving heavy loads.
- Ensure that loads are secured properly for transport!
- Always secure transport routes when bringing in and moving heavy loads.
- Never stand underneath suspended loads.

NOTICE

The batteries' transportation packaging must be labeled in accordance with all applicable hazardous material regulations!

NOTICE

When transporting the machine, make sure to comply with all safety and accident prevention regulations.

8.1.1 Manual transport

Follow the steps below to transport the Profile grinder GP 3600 +S correctly by hand:

1. Shut down the machine.

For more detailed information, please refer to Chapter 5 "Decommissioning" on page 36.

2. Transport the Profile grinder by hand only as far as necessary, using the handles and the transport roller.

If the Profile grinder needs to be transported across longer distances, make sure to use suitable equipment to transport it to its destination (see)Chapter 8.1.2 "Transport by means of transport" on page 65

NOTICE

To prevent operating fluids from leaking from the engine, only ever transport and park the machine in an upright position.

NOTICE

When setting down the machine, always proceed with caution to avoid damage to the guidance system.

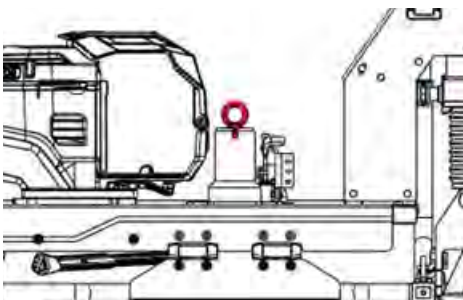
8.1.2 Transport by means of transport

Follow the steps below to transport the Profile grinder GP 3600 +S correctly by means of transport:

1. Shut down the machine.

For more detailed information, please refer to Chapter 5 "Decommissioning" on page 36.

2. Attach the Profile grinder GP 3600 +S to the lifting eye.



3. Ensure that the transport route is clear, and that no persons are in the danger zone.

4. Transport the Profile grinder upright to its intended destination with the help of suitable

NOTICE

Check that the machine has been sufficiently secured, to prevent it from falling.

NOTICE

To ensure that the machine cannot topple over or be damaged, and that it stands upright, secure it to the lifting fixtures with transport straps.

NOTICE

In the case of transport on a loading plate, make sure that the engine and the controls are not damaged by their transport straps, nor by any other objects needing to be transported.

equipment.

5. Carefully set the Profile grinder GP 3600 +S down, in an upright position, in the intended location.

NOTICE

To prevent operating fluids from leaking from the engine, only ever park the machine in an upright position.

NOTICE

When lowering the machine, always proceed with caution to avoid damage to the guidance system.

6. Remove the Profile grinder GP 3600 +S from the lifting eye.

8.2 Storing the GP 3600 +S

NOTICE

Storage outdoors is strictly prohibited and may result in damage to the profile grinder.

The following storage conditions need to be adhered to in order to properly store the machine (please refer to Table 8-1):

Storage 8-1 **Storage conditions**

Conditions	
Ambient conditions	- Protected from exposure to UV; - not placed directly next to heaters or other heat sources (to prevent the material from getting distorted), - dust-free and - Ozone-free environment (no fluorescent light sources, mercury vapour lamps, photocopiers etc.)
Bearing temperature	0 °C to 40 °C (32 °F to 104 °F)
Relative humidity	40 % to 60 %

Follow the steps below to store the Profile grinder GP 3600 +S correctly:

1. Shut down the machine.

For more detailed information, please refer to Chapter 5 "Decommissioning" on page 36.

2. Transport the Profile grinder by hand only as far as necessary, using the handles and the transport roller.

If the Profile grinder needs to be transported across longer distances, make sure to use suitable equipment to transport it to its destination.

For more detailed information, please refer to Chapter 8.1.2 "Transport by means of transport" on page 65.

NOTICE

Use suitable devices to secure the machine during transportation!

Use lashing straps to secure the profile grinder in such a way that it will remain upright and cannot fall over and/or be damaged.

3. Remove the batteries.

For more detailed information, please refer to Chapter 4.9 "Removing the batteries" on page 34.

4. Clean the Profile grinder GP 3600 +S.

For more detailed information, please refer to Chapter 7.4 "Cleaning the GP 3600 +S" on page 48

5. Fix up any paint damage.

6. Apply a thin coating of oil to any areas that could rust.

7. Properly store the Profile grinder GP 3600 +S at the corresponding storage location.

NOTICE

Store the Profile grinder on pallets or shelves (not directly on the floor or against walls) in order to prevent the ingress of moisture.

NOTICE

Store the Profile grinder upright or horizontally on the side of the Rupture protection.

NOTICE

If necessary, use a protective cover/dust cover to protect internal parts from soiling and other impurities.

8.3 Putting the GP 3600 +S back into operation

Follow the steps below in order to put the machine back into operation:

1. Remove the GP 3600 +S from its storage location.
2. If you used a protective cover or dust cover, remove it.
3. Transport the GP 3600 +S to the place where it will be used.

For more detailed information, please refer to Chapter 8.1 "Transportation of the GP 3600 +S" on page 64.

4. Insert the batteries.

For more detailed information, please refer to Chapter 4.2 "Inserting the batteries" on page 24.

5. Go through all the preparation steps.

For more detailed information, please refer to Chapter 3 "Commissioning" on page 21.

9 DISPOSAL

Summary

How to properly dispose of the GP 3600 +S and its components and/or accessories.



The disposal of rechargeable batteries/accumulators is regulated by the European Battery Directive (EU) 2023/1542. The machine must be disposed of exclusively by trained specialised personnel or by specialised companies that have been tasked with this disposal. Always ensure that disposal takes place in an environmentally responsible manner!

NOTICE

At the end of its service life, the GP 3600 +S must be separated from unsorted municipal waste and properly disposed of in compliance with all applicable national and international legislation and regulations.

NOTICE

The machine must be disposed of exclusively by trained specialised personnel or by specialised companies that have been tasked with this disposal.

The Elektro-Thermit GmbH & Co. KG offers business customers in Germany the opportunity to return their old B2B electrical and electronic equipment that they have purchased from Elektro-Thermit GmbH & Co. KG, so that the reuse, recycling and environmentally friendly disposal of this equipment can be ensured. To arrange for the return of an old B2B device, please use the return form (see Annex E - Return form of Page VIII).

If you have any questions about the costs of returning your B2B devices, please contact customer services.

The service offered by Elektro-Thermit GmbH & Co. KG is a standard local pickup service.

Next steps

1. Shut down the machine (please refer to Chapter 5 "Decommissioning" on page 36).
2. Remove the batteries (EGO Power+ 56V ARC lithium™) from the GP 3600 +S (please refer to Chapter 4.9 "Removing the batteries" on page 34).

NOTICE

Follow EGO's disposal instructions (please refer to Chapter 1.4 "Further applicable documents" on page 4).

3. Dispose of the Profile grinder at an authorised recycling facility.

9.1 Waste code numbers (WCN) in the EU

The information in this chapter is intended to ensure environmentally-friendly disposal of the GP 3600 +S. For this purpose, the structure was analysed and the waste generated during disposal was, as far as possible, assigned to the waste types identified in the European Waste List with a six-digit waste code number.

The waste code numbers marked (*) are hazardous within the meaning of Section 41 of the Circular Economy Act. This also applies to waste collected by public waste disposal authorities pursuant to Section 15 of the Circular Economy Act.

The waste designations corresponding to the waste code numbers are listed in Table 9-1.

Tab. 9-1 Waste code numbers (WCN)

Waste code numbers (WCN)	Waste designation
02 01 10	Scrap metal
08 01 11*	Paint and varnish waste containing organic solvents or other hazardous substances.
08 01 21*	Paint or varnish remover waste
15 02 02*	Absorbent and filter materials (including oil filters not otherwise specified), wiping cloths and protective clothing contaminated by dangerous substances
16 02	Waste from electrical and electronic devices
16 06	Batteries and accumulators
17 02 03	Plastic
17 04 01	Copper, bronze, brass
17 04 02	Aluminium
17 04 05	Iron and steel
17 04 11	Cables except those falling under 17 04 10* (cables containing oil, coal tar or other dangerous substances).

10 CUSTOMER SERVICE

Summary

Contact information for the manufacturer in the event that you need to get in touch in order to buy spare parts, return an old device, or get a problem fixed.

10.1 Contact details

You can find the contact information in Table 10-1 below:

Tab. 10-1 **Contact details**

Address	ELEKTRO-THERMIT GMBH & CO.KG A GOLDSCHMIDT COMPANY Chemiestraße 24 06132 Halle (Saale)
Phone	+49 345 7795-600
Fax	+49 345 7795-770
E-mail	et@goldschmidt.com
Internet	www.goldschmidt.com

ANNEX A - TECHNICAL DATA

NOTICE

For more technical data about supplier components, refer to Chapter 1.4 "Further applicable documents" on page 4.

Tab. A-1 General data

General data	
Manufacturer	ELEKTRO-THERMIT GMBH & CO.KG A GOLDSCHMIDT COMPANY Chemiestraße 24 06132 Halle (Saale)
Device information	
Designation	Profile grinder GP (GP 3600 +S)
Serial number	fromGP3600+S-0012
Year of manufacture	2026

Tab. A-2 Technical data

Technical data	
Measures and weights	
Length	1220 mm / 48 in
Height (max.)	1050 mm / 41.3 in
Height (min.)	730 mm / 28.7 in
Width	500 mm / 19.7 in
Weight (without battery)	50 kg / 110 lbs
Roller spacing	850 mm / 33.5 in
Performance (max.)	3,5 kW / 3.7 hp
Drive	
Motor type	Battery-operated motor
Motor manufacturer	EGO Europe GmbH
Engine model	PU2770
Number of batteries	2
Type of battery	EGO Power+ 56V ARC lithium™
Battery potential	56 V
Battery capacity	12 Ah

Tab. A-2 **Technical data** <continued>

Technical data	
Motor speed	3600 rpm
Temperature ranges/Operating conditions	
Ambient temperature when operating the machine	-20 °C to +40 °C (-4 °F to +104 °F)
Ambient temperature when charging the batteries	+5 °C to +40 °C (+41 °F to +104 °F)
Ambient temperature while in storage	0 °C to 40 °C (32 °F to 104 °F)

Tab. A-3 **Emissions**

Emissions	
In technically perfect condition, the A-assessed emission level at the workplace is > 70 dB(A) during the grinding process. It is mandatory to wear ear defenders approved for use in the rail sector.	
Sound pressure level (grinding)	70 dB(A)
Noise level (grinding)	92 dB(A)
Hand-arm vibration (grinding), measured at the handles	4,6 m/s ²

**HEARING LOSS.**

Noise levels during grinding may result in permanent hearing loss.

Make sure to always wear hearing protection.

Individuals who are not working with or on the grinding machine must stay at a minimum distance of 5 m.

Agree on clear and effective hand signals for communication.

ANNEX B - OVERVIEW DRAWINGS

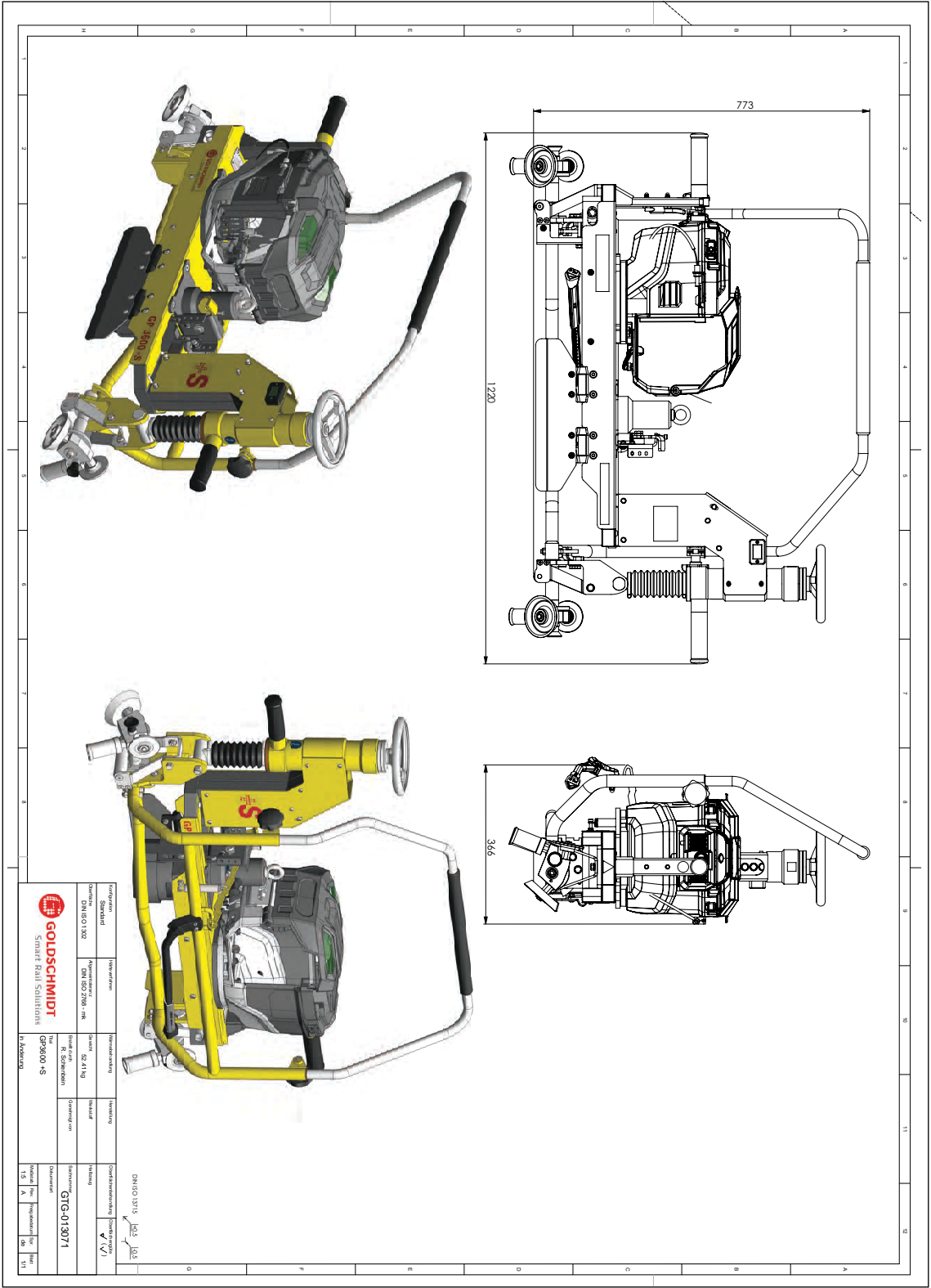


Fig. A-1 Overview drawings

ANNEX C - DECLARATION OF CONFORMITY

TRANSLATION

EC Declaration of Conformity

in accordance with EC Machinery Directive 2006/42/EG, Appendix II, No. 1A

Manufacturer:

ELEKTRO-THERMIT GMBH & CO. KG

Chemiestraße 24

06132 Halle (Saale)

hereby declares that the following product

Trade name: Profile grinder GP
Model: GP 3600 +S
Serial number: GP3600+S-XXXX (XXXX from 0012)
Year of construction: 2026

corresponds to all relevant provisions of EC Machinery Directive 2006/42/EC.

Related harmonised standards

EN ISO 12100: 2011-03 Safety of machinery - General principles for design - Risk assessment and risk reduction

EN 13977:2011-04 Safety requirements for portable machines and trolleys with rail wheels or rollers designed for construction and maintenance work

EN 62841-1:2023-03 Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements

EN ISO 5349-1:2001-12 Mechanical vibration - Measurement and evaluation of human exposure to hand-arm vibration - Part 1: General requirements

EN IEC 55014-1:2022-12 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar electrical appliances - Part 1: Emission

EN IEC 55014-2:2022-10 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity

Mr. Sven Kummer, Am Schenkberg 20, 04349 Leipzig, is authorised to produce the technical documentation.

Halle (Saale), 21 May 2026



Dr. Jörg Semmler
Managing Director

ANNEX D - LIST OF SPARE PARTS AND ACCESSORIES

When ordering accessories, you will need to provide your GP 3600 +S's model and serial number. You can find this information on the rating plate (please refer to Chapter 2.4.1 "Rating plate" on page 8).

Tab. D-1 List of spare parts

Spare part		Drawing number	Item number	Quantity
	Adjustment, complete	GTG-012113		1
	Drive train	GTG-005118		1
	Handle, rubber cap	GTG-005258	363784	1
	Rail guide, motor	GTG-005185		1
	Rail guide, handwheel	GTG-005205		1
	Friction hinges	GTG-011986		1
	Air filter modification	GTG-012680		1

Tab. D-1 List of spare parts <continued>

Spare part		Drawing number	Item number	Quantity
	Bowden cable, battery motor, complete	GTG-013977		1
	Battery motor PU2700 (basis)	GTG-012686		1
	Yanmar tank installed	GTG-011037		1
	Bowden cable lever	GTG-011041	363822	1
	V-belt XPA L825	GTG-012632		1
	Baffle plate	GTG-010498	257910	1
	Operating hours counter	GTG-011617	363721	1
	Tie-down hook	GTG-008561	257909	1
	Pressure spring	GTG-013970		1

Tab. D-1 List of spare parts <continued>

Spare part		Drawing number	Item number	Quantity
	Honda GXR 120	GTG-010811		1
	V-belt XPA L857	GTG-005143	363736	1
	V-belt pulley SPA D100	GTG-005116		2
	V-belt pulley SPA d80	GTG-010915		1

Tab. D-2 Accessories

Accessory	Quantity
EGO Power+ 56V ARC lithium™ (12 Ah)	2
Cup grinder	1

ANNEX E - RETURN FORM



Request for the take-back and disposal of B2B old electrical equipment

ELEKTRO-THERMIT GMBH & CO. KG
A Goldschmidt Company
Chemiestr. 24
06132 Halle (Saale) Deutschland

General company information

Company name:
Street, house number:
Additional details (building/entrance/floor):
Post code, city/town:
VAT ID:

Primary contact person

surname, given name:
e-mail address:
telephone number:

Proxy contact person

surname, given name:
e-mail address: telephone
number:

Billing address

Company name:
Street, house number:
Postcode, city:
E-Mail:
Telephone number:

Devices to be collected

Product name:
Brand:
Serial number:
Amount (units):
Total weight (kg):

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