GOLDSCHMIDT
Smart Rail Solutions

CPU 520+S
BATTERY-POWERED HIGH-PRESSURE HYDRAULIC EQUIPMENT

TRANSLATION OF ORIGIN

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HISTORY OF CHANGES

Version	Date	Change / Description	Author	Approved by
1.0	2024-10-28	First edition	Goldschmidt Holding GmbH	
2.0	2024-12-01	Design adjustment, change in dimensions valid from serial number: CPU 520 +S-0020	Goldschmidt Holding GmbH	

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** – **S**chlagwort (keyword)
	A - **A**rt und Quelle der Gefahr (type and source of hazard)
	F - **F**olgen bei Nichtbeachtung (consequence of failure to observe the instruction)
	E - **E**ntkommen (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

WARNUNG	**RISK OF INJURY.** **There is the risk of injuries from overpressure.** **The device has a pressure relief valve to protect against peak pressures exceeding the maximum permissible system pressure of 520 bar.** **The pressure relief valve must never be removed, bypassed or adjusted.** **If the pressure gauge on the device indicates a pressure higher than 520 bar, the device must be switched off immediately and remain out of service until the reason for this malfunction has been eliminated.**

Safety instructions related to property damage

NOTICE	**Genuine spare parts and/or accessories authorized 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	**The Operation manual CPU 520+S must be read carefully before starting any operation, assembly, installation, and/or maintenance work!**
NOTICE	**A hard copy of the Operation manual CPU 520+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 41.**
NOTICE	**Properly dispose of all packaging material.** **For more detailed information, please refer to Chapter 9 "Disposal" on page 41.**

NOTICE

See the Chapter 9.1 "Waste code numbers (WCN)" on page 42 for the waste code numbers.

RESIDUAL RISK WARNING

All the components of the hydraulic device CPU 520+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 hydraulic device CPU 520+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 CPU 520+S.

ABBREVIATIONS

	Units of measurement
%	Percent
°C	Degrees Celcius
°F	Degrees Fahrenheit
Ah	Ampere-hour
dB (A)	Decibel
kg	Kilogram
kW	Kilowatts
L	Litres
L/min	Litres per minute
mm	Millimeters
rpm	Revolutions per minute
V	Volts

	General
max	maximum
min	minimum
e.g.	for example

GLOSSARY

Symbols and pictograms

Symbol	Explanation
	Hazard warning relating to whipping hose lines
	Wear safety eyewear
	Wear work gloves
	Wear protective clothing

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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

The operation manual describes the structure and function of the battery-operated high-pressure hydraulic device CPU 520+S.

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 2.0 (translation of origin)) is meant for the following machine configuration:

- Battery-powered high-pressure hydraulic device, CPU 520+S from the serial number CPU 520 +S-0020 and
- a shearing device.

1.3 Requirements for operators

The operators who will be using the CPU 520+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 responsibilities, roles and supervision of the operating personnel must be precisely regulated by the operating company.**
NOTICE	**The operating company must make sure that its operating personnel has fully understood the Operation manual CPU 520+S's contents.**
NOTICE	**This briefing must be documented in writing.**

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:
  Personnel trained in the regular operation of the machine; and
- Maintenance personnel/specialized personnel:
  Personnel who have received special training and briefing intended specifically for maintenance, servicing, and/or repair work on the machine.

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/specialized personnel**
Working with the machine, operating the machine	*x*	*x*
Cleaning the machine	*x*	*x*
Visual inspection	*x*	*x*
Identifying malfunctions and other issues	*x*	*x*

Tab. 1-1 Qualification level <continued>

Occupation	Qualification level	
	Operating personnel	**Maintenance/specialized personnel**
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 safety eyewear	- during operation, - during maintenance work, and - during repair work.
	Wear work gloves	- during maintenance work, and - during repair work.
	Wear protective clothing Wear long-sleeved work clothing, to protect your skin against splashing hydraulic oil.	- during maintenance work, and - during repair work.

NOTICE

The personal protective equipment specified for this device in no way exempts the user from the obligation to wear the protective equipment specified for aluminothermic welding.

1.4 Further applicable documents

NOTICE	**Passing the Operation manual CPU 520+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 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.**

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 for EGO Power+ 56V ARC lithium™ battery [EGO]

Tab. 1-4 Additional applicable documents – manufacturer documentation

Technical documentation (manufacturer documentation)	
Return form	Please refer to Annex H - Return form on Page IX

2 CONSTRUCTION DESCRIPTION

Summary	An overview of the CPU 520+S, the names of the various sub-assemblies and components, and what they do.

NOTICE	**Unauthorized 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 CPU 520+S, including any use that extends beyond the intended use, is impermissible.**
NOTICE	**The machine must not be operated in an environment where there is a risk of fire or explosion nor in the vicinity of flammable or explosive liquids or gases.**

2.1 Function description

The Battery-powered high-pressure hydraulic equipment CPU 520+S is a hydraulic pressure generator with a peak pressure of 520 bar and a maximum flow rate of 1.45 L/min.

The pressure generator is a radial piston pump, driven by a brushless DC motor.

The hydraulic oil is pumped from a tank with a volume of 4.0 L.

The electrical energy is provided by a lithium-ion battery manufactured by EGO (type: EGO Power+ 56V ARC lithium™).

The hydraulic hoses are connected via quick-release couplings with safety locks.

The system pressure can be read at any time using a pressure gauge.

The device has a pressure relief valve to protect against peak pressures exceeding the maximum permissible system pressure.

A shut-off valve is installed for manual pressure relief, and can be used to relieve the hydraulic system at any time.

2.2 Intended use

It is intended exclusively for carrying out the shearing process with hydraulic weld trimmers after aluminothermic welding.

Connected weld trimmers and hydraulic hoses must be designed for an operating pressure of at least 520 bar.

The CPU 520+S is battery powered. Only EGO Power+ 56V ARC lithium™batteries manufactured by EGO may be used.

The machine must always be operated in strict compliance with the specified operating conditions (see Annex A - Technical data on Page I).

The machine may only be operated upright, with the battery compartment closed.

Any use that goes beyond this does not constitute 'intended use' of the machine. Examples of intended use are:

- operating pressure sensors other than high-pressure weld trimmers;
- operating the machine with hydraulic hoses that are not designed for an operating pressure of 520 bar;
- operating the machine with defective or removed protective devices (e.g. sheet metal coverings, Battery compartment cover (with toggle latch), pressure relief valve);
- operating the machine on its side;
- manipulation of the pressure limit or adjustment of the pressure relief valve; and/or
- non-compliance with the safety, operating and maintenance instructions described in this operation manual.

2.3 Operating conditions

NOTICE **Do not operate the machine if real conditions differ from these operating conditions.**

Table 2-1 on page 6 describes the operating conditions in greater detail:

Tab. 2-1 Operating conditions CPU 520+S

Operating conditions	
Ambient temperature when operating the machine	-10°C to +40°C
Ambient temperature when charging the batteries	+5°C to +40°C
Minimum oil temperature	+10°C

Also, the following conditions need to be satisfied when operating the machine:

- 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.
- The machine must not be operated in an environment where there is a risk of fire or explosion nor in the vicinity of flammable or explosive liquids or gases.
- The workplace must be illuminated sufficiently to enable potential danger areas to be detected in good time.
- The machine can only be operated in a dry location.
- The installation area of the machine must not have a gradient of 10 or more.

2.4 Main sub-assemblies

Figure 2-1 on page 7 shows the main sub-assemblies on the CPU 520+S.

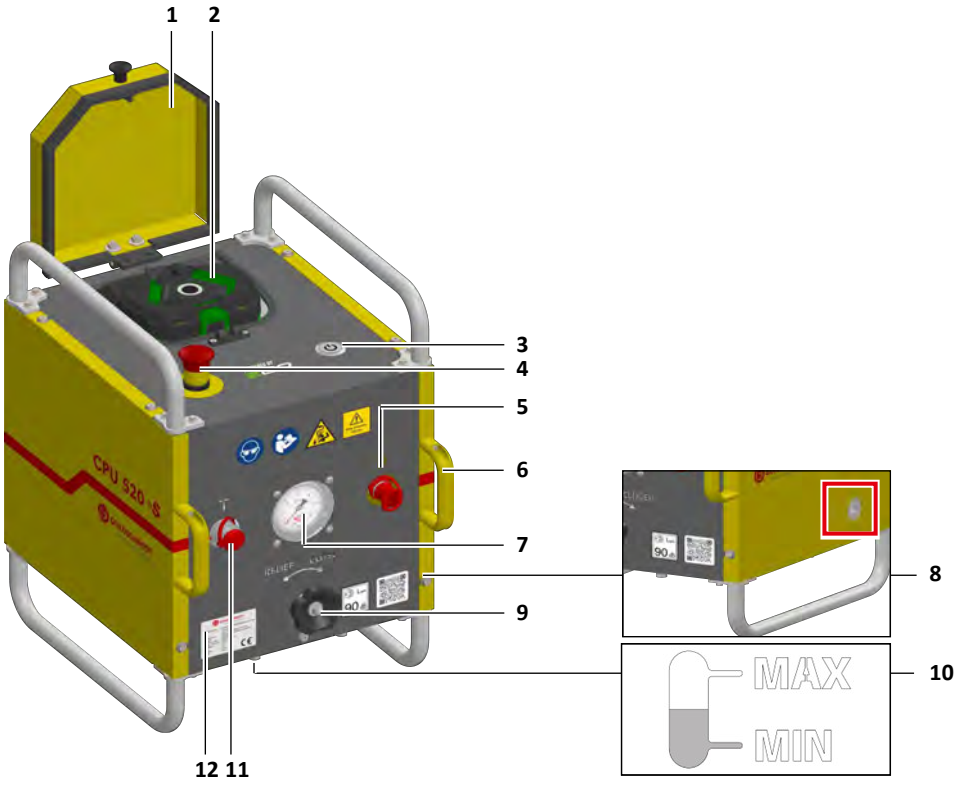


Fig. 2-1 Main sub-assemblies CPU 520+S

1	Battery compartment cover (with toggle latch)	5	Male quick release connector for pressure line (P)	9	Shutoff valve for manual pressure relief
2	Battery with charge status indicator	6	Coupling protection (2 parts)	10	Oil level indicator
3	ON/OFF pump switch	7	High pressure gauge	11	Female quick release connector for return (T)
4	Emergency stop button with turn-to-release function	8	Oil filler / oil drain plug (on the side)	12	Rating plate

The illuminated ON/OFF pump switch has the following modes (see Table 2-2 on page 7).

Tab. 2-2 Modes ON/OFF pump switch

Modes	Description
Green (continuous light)	The hydraulic pump is switched on and fully functional.
off	The hydraulic pump is switched off.

2.4.1 Rating plate

The rating place is on the front of the left-hand CPU 520+S, next to the Shutoff valve for manual pressure relief (see Figure 2-2 on page 8).

Fig. 2-2 Rating plate

The rating plate contains the following information:

- Manufacturer information,
- the product model,
- the year of manufacture,
- the dead weight,
- the maximum pressure,
- the serial number and
- the CE marking.

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

2.5.1 Manometer

The High pressure gauge is on the front of the hydraulic device CPU 520+S and displays the system pressure (see Figure 2-3 on page 9).

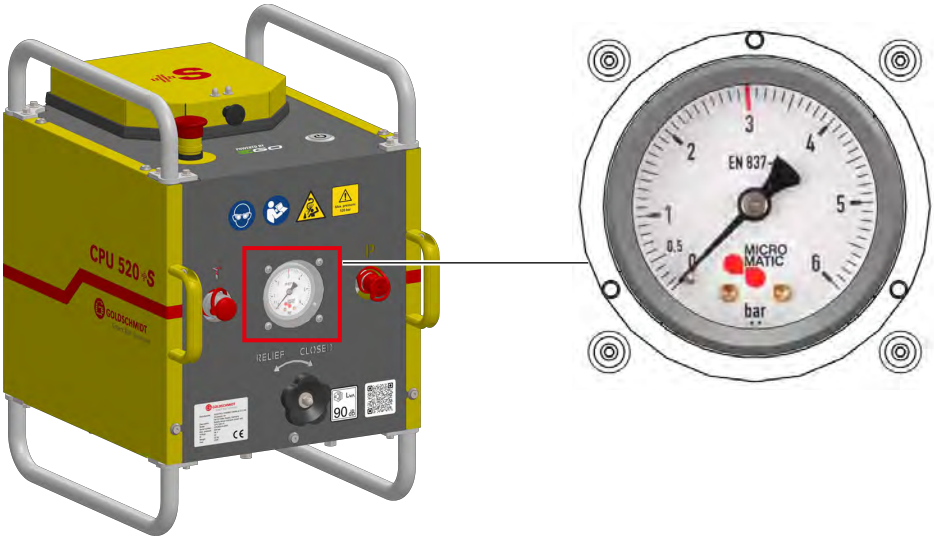


Fig. 2-3 High pressure gauge

2.6 Colours and safety labels

2.6.1 Colouring

Table 2-3 on page 9 lists the colours for the various CPU 520+S components:

Tab. 2-3 Colouring CPU 520+S

Color name / RAL code	Components
Signal red (RAL 3001)	Emergency stop button with turn-to-release function, Male quick release connector for pressure line (P), Female quick release connector for return (T),
Signal black (RAL 9004)	Shutoff valve
Golden yellow (RAL 1004)	Housing (side), Battery compartment cover (with toggle latch), front coupling protection
Traffic grey (RAL 7043)	Housing

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.

The CPU 520+Smandatory and warning signs shown in Figure 2-4 on page 10 can be found on the front of the .

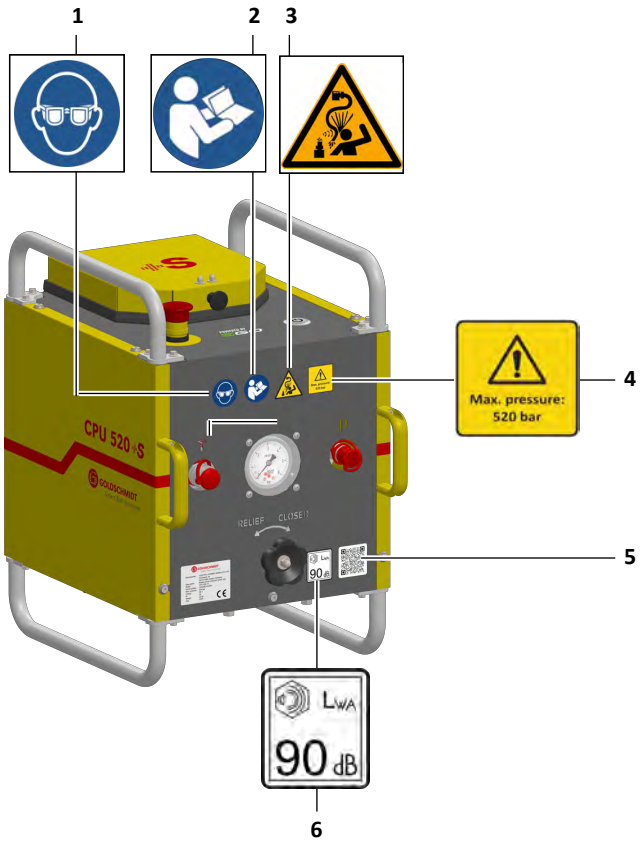


Fig. 2-4 Safety labels (front page)

1	Wear safety eyewear	3	Pay attention to the operation manual.	5	QR-Code (manual)
2	Risk of whipping by hose lines	4	Warning signs to note the peak pressure (520 bar)	6	Sound power level

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 2-5 on page 11).

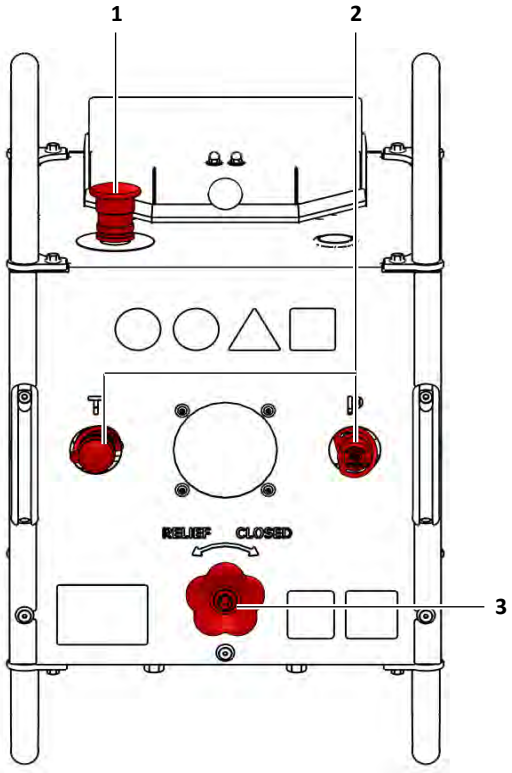


Fig. 2-5 Safety systems

1	Emergency stop button with turn-to-release function	2	Quick release connectors with safety locks	3	Shutoff valve for manual pressure relief (handwheel)

2.7.1 Manual pressure relief

If the hydraulic pump is activated accidentally or without a weld trimmer connected, pressure will build up within the device's hydraulic system. The quick release connectors of the hydraulic device CPU 520+S are then pressurised, so that hydraulic hoses can no longer be connected. A shut-off valve is installed, so that the pressure can be released manually in this case.

For more information on this procedure, see Chapter 4.5 "Manual pressure relief" on page 21.

2.8 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. For this purpose, there is an integrated Emergency stop button with turn-to-release function which switches off the hydraulic system when pressed.

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

2.9 Accessories

NOTICE

Annex G - Accessories on Page VIII lists additional accessories.

2.9.1 Battery

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

Each battery features a charge status indicator. The various battery modes are described in Table 2-4 on page 12 below:

Tab. 2-4 Battery LED indicator modes

Modes		Description
Five LEDs light up green (continuous light)		80% ≤ charge level ≤ 100%
Four LEDs light up green (continuous light)		60% ≤ charge level <80%
Three LEDs light up green (continuous light)		40% ≤ charge level < 60%
Two LEDs light up green (continuous light)		20% ≤ charge level < 40%
One LED lights up green (continuous light)		10% ≤ 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

Modes		Description
No light on any of the LEDs		The hydraulic pump is switched off.

2.9.2 Charger

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

3 COMMISSIONING

Summary	Instructions that explain how to prepare the CPU 520+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.**
NOTICE	**Before commissioning, always check that all operating conditions are met (see Chapter 2.3 "Operating conditions" on page 6).**
NOTICE	**At an ambient temperature below 10 C, the hydraulic device CPU 520+S must first be operated free of load until the oil temperature reaches at least 10 C.**

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 44).

2. Visually inspect the hydraulic device CPU 520+S and the batteries for damage.

   Damaged components and machine parts will need to be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).

   If you notice any leaks, stop all work immediately and follow the instructions in Chapter 6 "Fault, cause and elimination" on page 26.

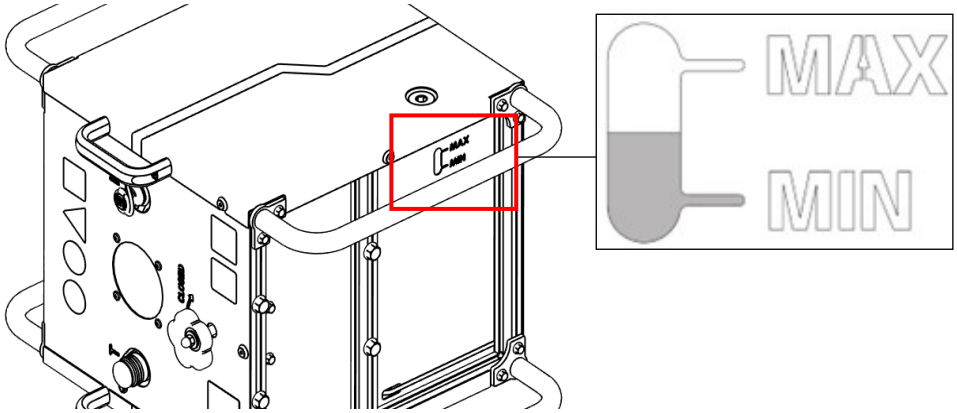
3. Check the oil level.

   The oil level in the tank can be read through the viewing window on the bottom of the device.

   The oil level is correct when it is between the MIN and MAX markings.

   Refill the hydraulic oil if the oil level is too low (see Chapter 4.3 "Refilling hydraulic oil" on page 18).

   Drain the hydraulic oil if the oil level is above the MAX marking (see Chapter 4.6 "Draining hydraulic oil" on page 22).



4. Remove excessive dirt or impurities from the controls and/or quick release connectors.
5. Use the pressure gauge to ensure that the hydraulic system is depressurised.
6. Make sure that the Shutoff valve is in the CLOSED position.
7. Check the batteries' charge status.
8. Insert the battery correctly.

   For more detailed information, please refer to Chapter 4.1 "Inserting the batteries" on page 16.
9. Switch the hydraulic device CPU 520+S on.

   For more detailed information, please refer to Chapter 4.2 "CPU 520+S Switching on" on page 17.

4 OPERATION

Summary	Instructions used to explain the main functions of the CPU 520+S.

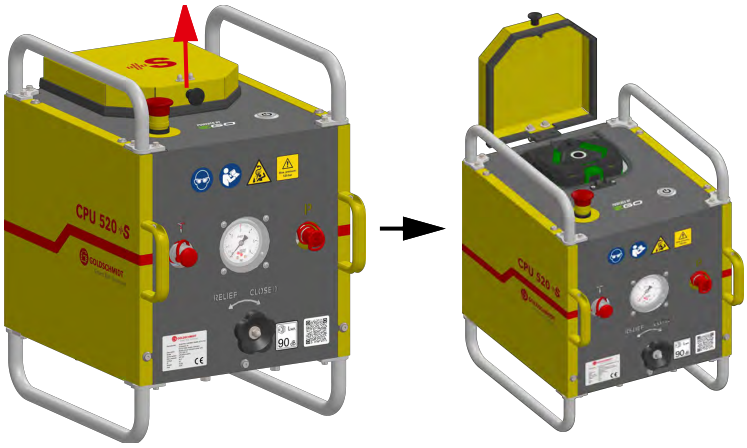
NOTICE	**If you detect any issues, report them to your supervisor immediately. Do not put the machine back into operation until after these issues have been fixed and you receive approval for operating it again.**
⚠ VORSICHT	**Whenever you are not operating the machine, make sure that it cannot be turned on by accident. Always use the emergency stop button to safely switch off the machine and prevent it from being switched on again, or remove the battery from the device.**

4.1 Inserting the batteries

NOTICE	**Only use the EGO Power+ 56V ARC lithium™ battery.**

Follow the steps below to insert the batteries correctly:

1. Open the Battery compartment cover (with toggle latch).



2. Fully insert the battery into the battery holder.
3. Close the Battery compartment cover (with toggle latch) and press it down until the lock audibly clicks into place.

4.2 CPU 520+S Switching on

WARNUNG

RISK OF INJURY.

If the quick release connectors are accidentally released, damage to hydraulic hose lines, leaks within the device or the application of excessively high forces (e.g. due to contamination in the hydraulic system), uncontrolled escape of hydraulic fluid and/or flying or bursting parts is to be expected. This also includes the folding over (whipping) of a hydraulic hose that has been torn off at one end. This can cause serious injuries.

- **Always use the safety locks on the quick release connectors.**
- **Regularly clean the quick release connectors to remove dust and other contaminants. Always replace the dust protection caps after use.**
- **In case of leaks, the device must be shut down immediately until the cause has been found and properly remedied.**
- **Always wear the required personal protective equipment, especially safety goggles.**

Follow the steps below to switch on the hydraulic device CPU 520+S correctly:

1. Make sure that the battery has been inserted correctly.

   For more detailed information, please refer to Chapter 4.8 "Removing the batteries" on page 24.

2. Remove the red protection caps from the quick release connectors.

3. Connect the hydraulic hoses and secure the connection with the clutch interlock. The coupling combination on the hydraulic device CPU 520+S and on the hydraulic hoses does not allow the pressure line and return line to be connected incorrectly.

4. On the weld trimmer, ensure that the hydraulic hoses are properly connected and that the hand valve is in the neutral position.

5. Make sure that the Emergency stop button with turn-to-release function has not been pressed. If necessary, turn the switch to unlock it.

6. Press the ON/OFF pump switch to switch on the hydraulic pump.

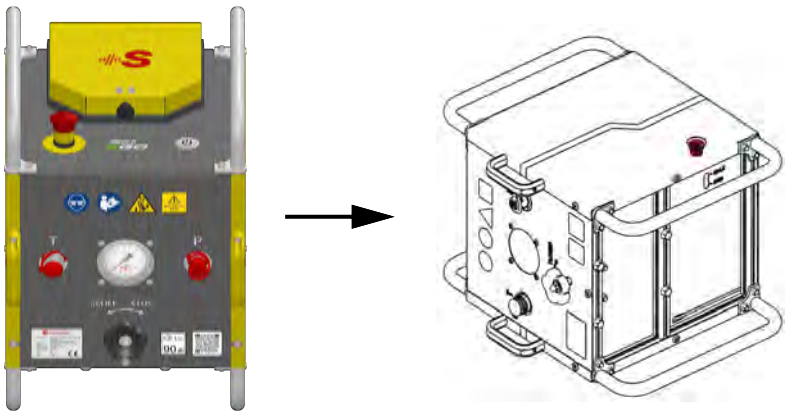
   The ON/OFF pump switch shows that the device is switched on when the green light is constantly lit.

4.3 Refilling hydraulic oil

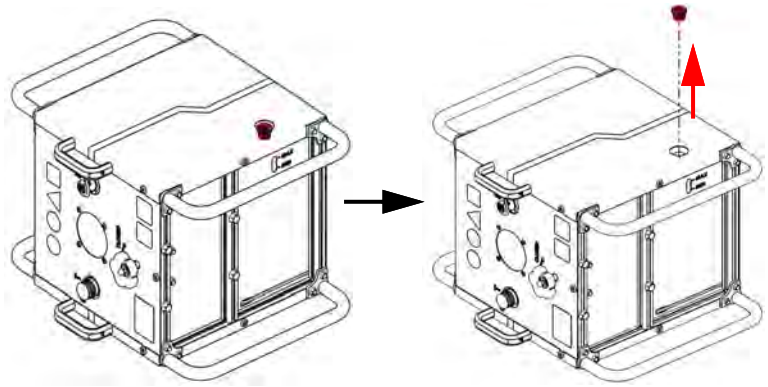
NOTICE	**Always make sure that everything is clean during the filling process. Dirt in the hydraulic system can cause hydraulic lines to become clogged and/or damage to the hydraulic pump.**
NOTICE	**If the oil volume in the tank is too low, the hydraulic pump will run dry. This can lead to critical damage after just a short time.**

Follow the steps below to refill the hydraulic oil correctly:

1. Switch the hydraulic device CPU 520+S off (see Chapter 4.7 "CPU 520+S Switching off" on page 23).
2. Remove the hydraulic device CPU 520+S from all electrical connections and lines.
3. Remove the battery (please refer to Chapter 4.8 "Removing the batteries" on page 24).
4. Lay the hydraulic device CPU 520+S on its left side, on an even surface.

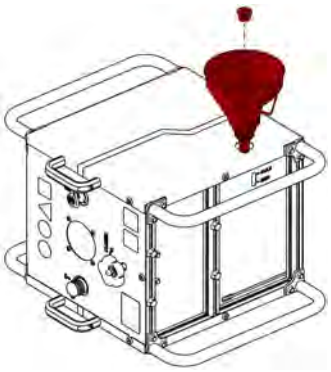


5. Remove the tank plug screw with a 10 mm Allen key.



6. Use a funnel to refill the hydraulic oil.

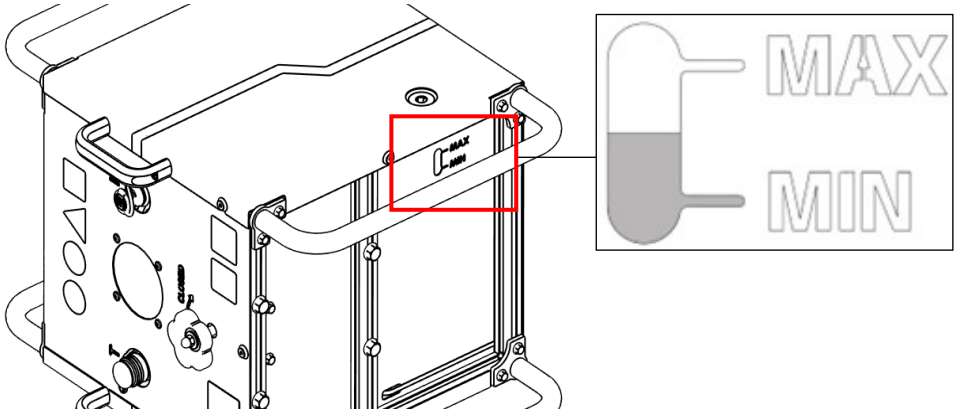
NOTICE	**Only hydraulic oil of viscosity class ISO VG 22 must be used when refilling.**
NOTICE	**There must not be too much hydraulic oil in the tank. Please note the maximum filling level so that there is room in the tank for hydraulic oil from the return line. Overfilling may cause damage to the hydraulic pump.**



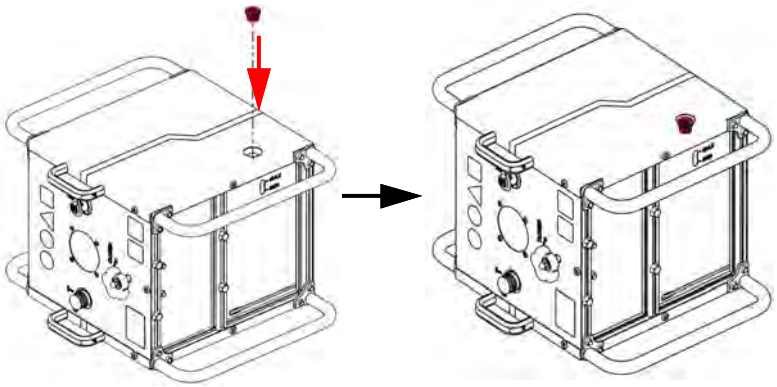
7. Check the oil level in the meantime, and top up if necessary.

   The oil level in the tank can be read through the viewing window on the bottom of the device.

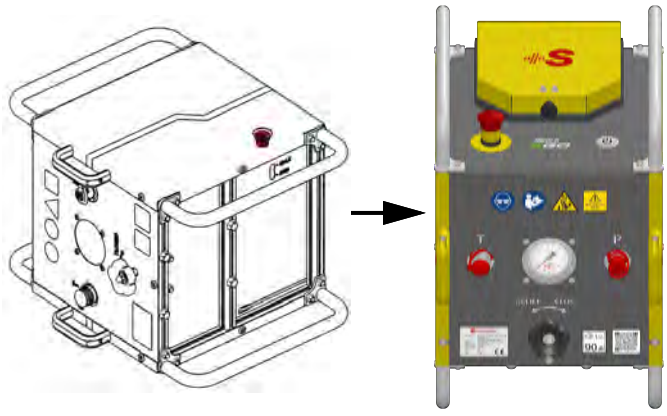
   The oil level is correct when it is between the MIN and MAX markings.



8. Close the oil tank with the tank plug screw and a 10 mm Allen key.



9. Set the hydraulic device CPU 520+S upright again.



10. Insert the battery (see Chapter 4.1 "Inserting the batteries" on page 16).

4.4 Filling empty equipment with hydraulic oil

Follow the steps below to completely fill the hydraulic hoses or weld trimmers with hydraulic oil:

1. Connect the weld trimmer to the hydraulic device using both pressure and return hosesCPU 520+S.

2. Position the hydraulic device CPU 520+S higher than the weld trimmer, to allow air to vent upwards from the weld trimmer and hoses.

3. Set the manual valve on the weld trimmer to 'neutral' and switch on the hydraulic pump.
4. Wait for approx. 1 minute, while the hoses are filled with hydraulic oil.
5. Then adjust the manual valve on the weld trimmer, to open or close the cylinders.

   The movement of the cylinders will initially be slow and jerky.
6. Allow the cylinders to complete several full strokes without pressure building up in the front and rear end positions. During this process, swivel the weld trimmer in all directions, to allow trapped air bubbles in the system to be released.
7. Once the cylinders open and close without interruption, the filling with hydraulic oil is complete.
8. Check the oil level in the hydraulic device, CPU 520+S and refill it with new hydraulic oil (see Chapter 4.3 "Refilling hydraulic oil" on page 18).

4.5 Manual pressure relief

⚠ WARNUNG

RISK OF INJURIES FROM OVERPRESSURE.

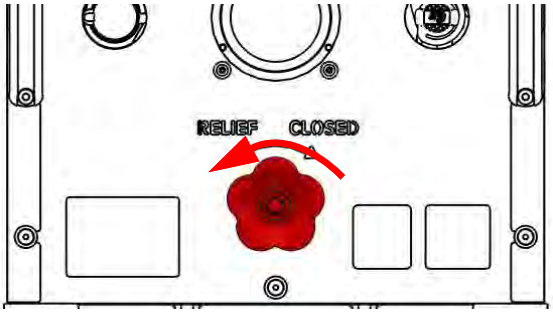
Hydraulic oil escaping under high pressure, and the acceleration of parts as a result of this, can cause serious injuries!
Before switching on the hydraulic pump, ensure that a hydraulic circuit is established between the hydraulic pump and the weld trimmer.
Das Hydrauliköl muss von der Hydraulikpumpe zum Aktor (Druckleitung P) und von dort zurück in den Öltank (Rücklauf T) fließen können.

- **Never connect or disconnect hydraulic hoses or quick release connectors when they are under pressure.**
- **Never relieve pressure in hydraulic hoses or quick release connectors, other than by using the shut-off valve as described in this chapter.**
- **Wear the specified personal protective equipment**

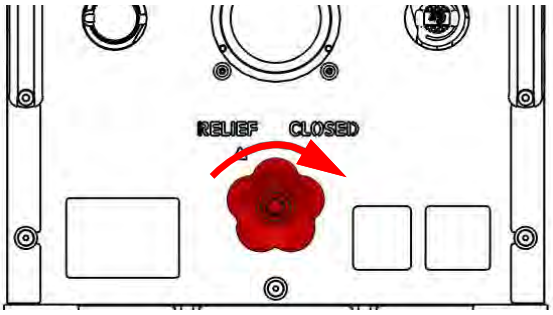
Follow the steps below to correctly manually relieve the pressure:

1. Turn the handwheel (Shutoff valve) anti-clockwise to the “RELIEF” position until the pressure gauge shows 0 bar again.

   While the handwheel is in this position, no pressure can build up within the system.



2. Turn the handwheel (Shutoff valve) clockwise to the "CLOSED" position, until it is hand-tightened, to close the shut-off valve and restore normal operating conditions.

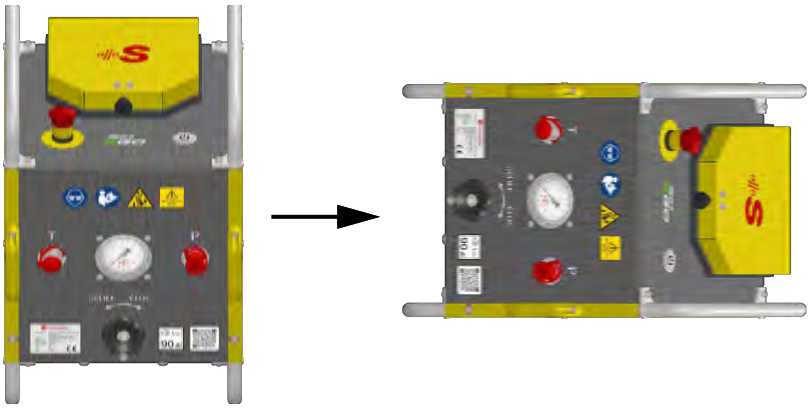


4.6 Draining hydraulic oil

NOTICE	**Hydraulic oil must not be pumped out of the tank when the hydraulic pump is switched on.** **When the hydraulic pump is switched on, the hydraulic circuit must always be closed by connecting both the pressure line and the return line.**
NOTICE	**If the oil volume in the tank is too low, the hydraulic pump will run dry. This can lead to critical damage after just a short time.**

Follow the steps below to drain the hydraulic oil correctly:

1. Switch the hydraulic device CPU 520+S off (see Chapter 4.7 "CPU 520+S Switching off" on page 23).
2. Remove the hydraulic device CPU 520+S from all electrical connections.
3. Position the hydraulic device CPU 520+S on a table or other elevated surface.
4. Lay the hydraulic device CPU 520+S on its right side, so that the tank cap screw extends beyond the edge of the table.

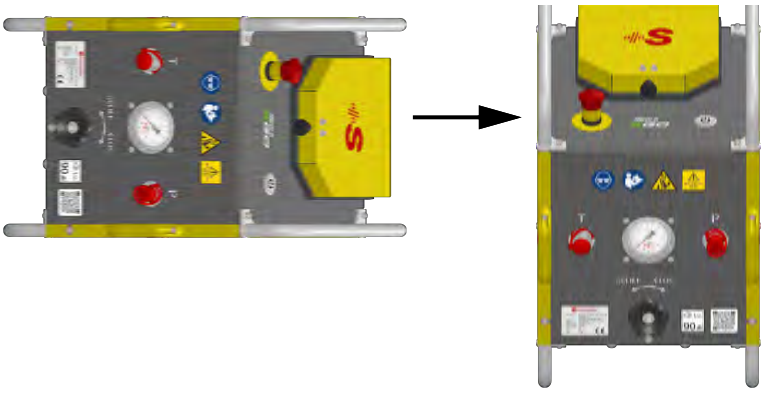


5. Place an oil collection container with a capacity of at least 4 litres under the tank cap screw.

6. Remove the tank plug screw with a 10 mm Allen key, and let all of the old oil drain out.

NOTICE	**Dispose of the old oil in accordance with the national and international laws and regulations, and follow the manufacturer's disposal instructions.**

7. Close the oil tank with the tank plug screw and a 10 mm Allen key.
8. Set the hydraulic device CPU 520+S upright again.



4.7 CPU 520+S Switching off

Follow the steps below to switch off the hydraulic device CPU 520+S correctly:

1. Before switching off the hydraulic pump, make sure that the system has been depressurised, i.e. the pressure gauge shows 0 bar.
2. Press the ON/OFF pump switch to switch off the hydraulic pump.

   The ON/OFF pump switch shows that the device is switched on when the green light goes out.

3. Remove the battery to prevent the device from being accidentally switched on again.

   For more detailed information, please refer to Chapter 4.8 "Removing the batteries" on page 24.

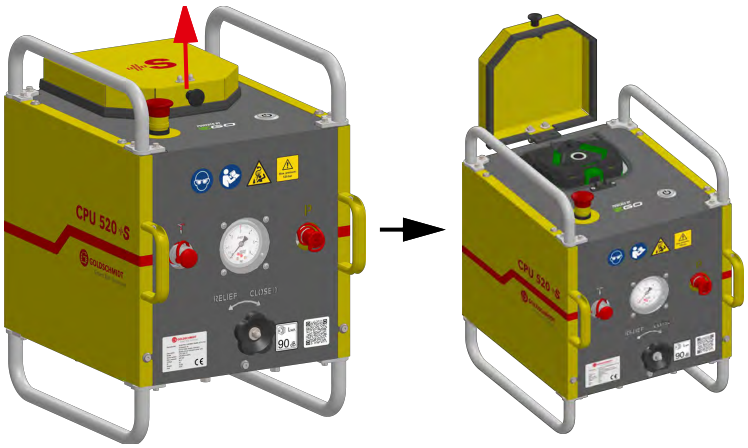
4. Make sure that the Battery compartment cover (with toggle latch) is closed and locked, so that no dust of moisture can enter the hydraulic device CPU 520+S.
5. Disconnect the cables and connections properly.
6. Put the red protection caps on the quick release connectors.

4.8 Removing the batteries

NOTICE **Make sure that the battery has been removed before storage.**

Follow the steps below to remove the batteries correctly:

1. Open the Battery compartment cover (with toggle latch).



2. Remove the battery from the battery holder.
3. Close the Battery compartment cover (with toggle latch) and press it down until the lock audibly clicks into place.

5 DECOMMISSIONING

Summary	Instructions used to explain how to shut down the CPU 520+S as preparation for maintenance, transportation, or storage.

1. Switch the hydraulic device CPU 520+S off (see Chapter 4.7 "CPU 520+S Switching off" on page 23).
2. Remove the hydraulic device CPU 520+S from all electrical connections.
3. Remove the battery (EGO Power+ 56V ARC lithium™) from the hydraulic device CPU 520+S (see Chapter 4.8 "Removing the batteries" on page 24).

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

4. Empty the oil tank completely (see Chapter 4.6 "Draining hydraulic oil" on page 22).

   NOTICE **Dispose of the old oil in accordance with the national and international laws and regulations, and follow the manufacturer's disposal instructions.**

6 FAULT, CAUSE AND ELIMINATION

Summary	Identifying problems and fixing them.

WARNUNG

RISK OF INJURY.

Improper or thoughtless troubleshooting measures can result in serious injuries and damage to the CPU 520+S hydraulic device.

- **Remove the battery from the device before carrying out any maintenance work.**
- **Only carry out maintenance work when the hydraulic system has been completely depressurised!**

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 44) in order to get information for maintenance steps or repairs.

The following Table 6-1 on page 26 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.	
Five battery LEDs light up red (solid light)	Battery overheating	1. Let the battery cool down.

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

Fault	Cause	Elimination
The hydraulic pump does not turn on when the pump power switch (ON/OFF) is pressed.	The battery has not been properly inserted into the battery holder.	1. Check the insertion of the battery, and adjust if necessary. The battery must be fully inserted into the battery socket.
	The electrical contacts of the battery or battery holder are dirty	1. Clean the contacts.
	The emergency stop button has been pressed and not unlocked (LED flashes green)	1. Reset the emergency stop button by using the turn-to-release function.
	There is an electrical problem	1. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).
The hydraulic pump does not build up pressure, or the cylinders on the weld trimmer do not move	The shutoff valve is open	1. Turn the Shutoff valve clockwise, to the "CLOSED" position.
	No hydraulic oil can be sucked in	1. Check the oil level, and refill the hydraulic oil if necessary (see Chapter 4.3 "Refilling hydraulic oil" on page 18).
Cylinders on the weld trimmer move irregularly or too slowly	Air in the hydraulic system	1. Vent the system (see Chapter 4.4 "Filling empty equipment with hydraulic oil" on page 20).
	The return flow filter is blocked	1. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).
The pressure gauge shows system pressure other than 520 bar, or the shear force is unexpected	The pressure limiting valve is misaligned	1. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).
Hydraulic oil leaks from the device	Leaks in the device's hydraulic system	1. Shut down the device. 2. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).

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.
Incorrect, untimely, or poorly considered maintenance work may result in personal injury or to damage to the machine.

- **Remove the battery before carrying out any maintenance work.**
- **Only carry out maintenance work when the hydraulic system has been completely depressurised.**
- **The maintenance instructions/intervals must be observed.**
- **Components must only be replaced using identical spare parts. For installation purposes, compliance with the stipulations of the component manufacturers is mandatory.**

RISK OF INJURY.
When removing impurities with compressed air, there is a risk of eye injuries from dust, metal fragments and/or atomised hydraulic oil.
Always wear the required personal protective equipment, especially safety goggles.

RISK OF INJURY.
Putting the machine back into operation intentionally and/or accidentally may result in injury.
Make sure that the hydraulic device CPU 520+S cannot be put back into operation intentionally or accidentally during maintenance and repair work, by removing the batteries.

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 41.

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

Wear the required personal protection equipment.

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 29).

Tab. 7-1 Maintenance schedule

Interval / Maintenance task	before every entry into service	every 20 operating hours	every 40 operating hours	every 100 operating hours	Annually	As necessary
Visual inspection of the hydraulic device CPU 520+S	X					X
Visual inspection and condition check Safety labels and rating plate			X			X
Cleaning the hydraulic device CPU 520+S		X				X
Checking the tightness of the quick release connector		X				X
Oil level check		X				X
Check for leaks		X	X			X
Screw connections check			X			X
Condition check of the High pressure gauge			X			X
Battery compartment cover condition check			X			X
Changing the hydraulic oil				X	X	

7.2 Visual inspection of the hydraulic device CPU 520+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.	**Visual inspection of general condition**	
1- 001	Carry out a visual inspection checking for 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 44).	

7.3 Cleaning the hydraulic device CPU 520+S

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
Cleansing tissue

Maintenance 7-2 Cleaning

Maintenance steps		Tools / materials
1.	**Cleaning the CPU 520+S**	
1- 001	Remove excess dirt, dust and hydraulic oil.	
1- 002	Wipe the hydraulic device CPU 520+S with a suitable cleaning cloth.	Cleansing tissue
1- 003	Check the cleanliness of the quick release connectors, to ensure that no contaminants enter the hydraulic system.	

7.4 Checking the tightness of the quick release connector

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
-

Maintenance 7-3 Tightness of the quick release connector

Maintenance steps		**Tools / materials**
1.	**Visual inspection**	
1- 001	Check the CPU 520+S for damage. 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 44).	
1- 002	Check the quick release connector for tightness. Leaking quick release connectors must be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).	

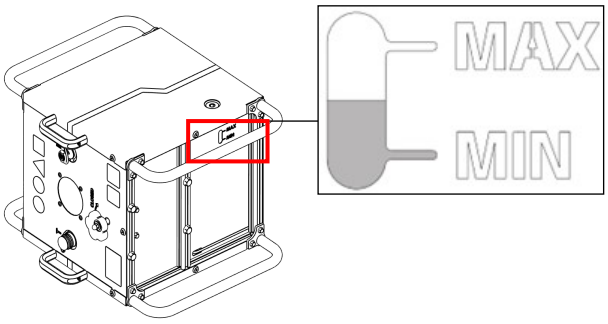
7.5 Oil level check

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
Hydraulic oil of viscosity class ISO VG 22 (if necessary: refill the hydraulic oil)
10 mm Allen key (if necessary: refill the hydraulic oil)
Funnel (if necessary: refill the hydraulic oil)

Maintenance 7-4 Oil level check

Maintenance steps		Tools / materials
1.	**Disconnect cables and connections**	
1- 001	Remove the hydraulic device CPU 520+S from all electrical connections and lines.	
2.	**Removing the batteries**	
2- 001	Remove the battery (please refer to Chapter 4.8 "Removing the batteries" on page 24).	
3.	**Oil level check**	
3- 001	Lay the hydraulic device CPU 520+S on its left side, on an even surface.	
3- 002	Check the oil level. The oil level in the tank can be read through the viewing window on the bottom of the device. The oil level is correct when it is between the MIN and MAX markings. 	
4.	**Draining or refilling hydraulic oil (where necessary)**	
4- 001	Refill the hydraulic oil if the oil level indicator is below the specified limit (seeChapter 4.3 "Refilling hydraulic oil" on page 18).	10 mm Allan key Hydraulic oil of viscosity class ISO VG 22 Funnel
4- 002	Drain the hydraulic oil if the oil level is above the MAX marking (see Chapter 4.6 "Draining hydraulic oil" on page 22).	
5.	**Inserting the batteries**	

Maintenance 7-4 Oil level check <continued>

Maintenance steps		Tools / materials
5- 001	Insert the battery (see Chapter 4.1 "Inserting the batteries" on page 16).	

7.6 Check for leaks

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
-

Maintenance 7-5 Check for leaks

Maintenance steps		Tools / materials
1.	**Visual inspection**	
1- 001	Check the CPU 520+S for damage. 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 44).	
1- 002	Check the CPU 520+S for leaks. If leaks are detected, the CPU 520+S must be deactivated. Then contact the customer service team (see Chapter 10 "Customer Service" on page 44).	

7.7 Screw connections check

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
suitable screwdriver

Maintenance 7-6 Checking of screw connections

Maintenance steps		**Tools / materials**
1.	**Check the screw connections**	
1- 001	Check all screw connections to make sure they are in place and secure. Any missing screw connections must be replaced.	
2.	**Retighten the screw connections**	
2- 001	Retighten all loose screw connections.	suitable screwdriver

7.8 Visual inspection and condition check Safety labels and rating plate

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
Rating plate Safety labels

Maintenance 7-7 Visual inspection and condition check of safety labels and rating plate

Maintenance steps		**Tools / materials**
1.	**Visual inspection and condition check**	
1- 001	Check that all safety labels are present and legible. Missing and illegible safety labels must be replaced.	Safety labels

Maintenance 7-7 Visual inspection and condition check of safety labels and rating plate <continued>

Maintenance steps		Tools / materials
1- 002	Check that the rating plate is present and legible. If the rating plate is missing or illegible, it must be replaced.	Rating plate

7.9 Condition check of the High pressure gauge

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
-

Maintenance 7-8 Condition checkHigh pressure gauge

Maintenance steps		Tools / materials
1.	**Condition check**	
1- 001	Check the High pressure gauge for damage and functionality. A High pressure gauge that is damaged or not working must be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).	

7.10 Battery compartment cover condition check

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
-

Maintenance 7-9 Condition checkBattery compartment cover (with toggle latch)

Maintenance steps		Tools / materials
1.	**Condition check**	
1- 001	Check the Battery compartment cover (with toggle latch) for damage and functionality. A Battery compartment cover (with toggle latch) that is damaged and/or not working must be replaced. Contact the customer service team (please refer to Chapter 10 "Customer Service" on page 44).	

7.11 Changing the hydraulic oil

Ambient conditions
No special ambient conditions need to be observed.

Personnel
Specialised personnel

Tools and materials
Hydraulic oil of viscosity class ISO VG 22 10 mm Allan key Funnel Oil collection container (capacity at least 4 litres)

Maintenance 7-10 Changing the hydraulic oil

Maintenance steps		Tools / materials
1.	**Disconnect cables and connections**	
1- 001	Remove the hydraulic device CPU 520+S from all electrical connections and lines.	
2.	**Removing the batteries**	
2- 001	Remove the battery (please refer to Chapter 4.8 "Removing the batteries" on page 24).	

Maintenance 7-10 Changing the hydraulic oil <continued>

Maintenance steps		Tools / materials
3.	**Draining old oil**	10 mm Allan key Oil collection container (capacity at least 4 litres)
3- 001	Drain the old oil (see Chapter 4.6 "Draining hydraulic oil" on page 22).	
4.	**Refilling hydraulic oil**	10 mm Allan key Hydraulic oil of viscosity class ISO VG 22 Funnel
4- 001	Refill the hydraulic oil (see Chapter 4.3 "Refilling hydraulic oil" on page 18).	
5.	**Inserting the batteries**	
5- 001	Insert the battery (see Chapter 4.1 "Inserting the batteries" on page 16).	

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.

NOTICE	**The Battery-powered high-pressure hydraulic equipment CPU may only be carried or positioned using the two tubular handles on top of the device.** **Carrying it by the battery cover, the coupling protection, or the feet is not permitted.**
NOTICE	**Positioning the device by pulling on connected hydraulic hoses is strictly prohibited!**
NOTICE	**The hydraulic device must not be thrown or subjected to strong impacts.**

8.1 Transportation of the CPU 520+S

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

Follow the steps below to transport the hydraulic device CPU 520+S correctly:

1. Shut down the machine.

   For more detailed information, please refer to Chapter 5 "Decommissioning" on page 25.

2. Put the hydraulic device CPU 520+S in an upright position.

3. Transport the hydraulic device CPU 520+S to the intended place.

8.2 Storing the CPU 520+S

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; - dust-free.
Bearing temperature	5 °C to 30 °C (32 °F to 104 °F)
max. storage period	2 years (continuously)
Relative humidity	40 % to 60 %

Follow the steps below to store the CPU 520+S correctly:

1. Transport the CPU 520+S to the place where it will be stored.

   For more detailed information, please refer to Chapter 8.1 "Transportation of the CPU 520+S" on page 38.

2. Remove the battery from the device. Make sure that the cover of the battery holder is securely sealed.

   For more detailed information, please refer to Chapter 4.1 "Inserting the batteries" on page 16

   NOTICE **Make sure that the cover of the battery holder is securely sealed.**

3. Clean all exterior surfaces, repair paint damage, and apply an oil film to areas which are prone to rust.

4. Properly store the CPU 520+S at the corresponding storage location.

   NOTICE **Store the hydraulic device CPU 520+S on pallets or shelves (not directly on the floor or against walls) in order to prevent the ingress of moisture.**

   NOTICE **Store the hydraulic device CPU 520+S upright.**

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

8.3 Putting the CPU 520+S back into operation

Follow the steps below in order to put the hydraulic device CPU 520+S back into operation:

1. Remove the CPU 520+S from its storage location.
2. If you used a protective cover or dust cover, remove it.
3. Transport the CPU 520+S to the place where it will be used.

   For more detailed information, please refer to Chapter 8.1 "Transportation of the CPU 520+S" on page 38.
4. Insert the battery.

   For more detailed information, please refer to Chapter 4.1 "Inserting the batteries" on page 16.
5. Go through all the preparation steps.

   For more detailed information, please refer to Chapter 3 "Commissioning" on page 14.

9 DISPOSAL

Summary	How to properly dispose of the CPU 520+S and its components and/or accessories.

Old oil must be disposed of in accordance with national and international laws and regulations.

The disposal of rechargeable batteries/accumulators is regulated by Directive 2006/66/EC. The machine must be disposed of exclusively by trained specialized personnel or by specialized companies that have been tasked with this disposal. Always ensure that disposal takes place in an environmentally responsible manner!

NOTICE

The disposal of the hydraulic device CPU 520+S falls under Directive 2012/19/EU. At the end of its service life, the hydraulic device must be separated from unsorted municipal waste and properly disposed of in compliance with all applicable national and international legislation and regulations.

NOTICE

Hydraulic oils, or rags or similar items contaminated with hydraulic oil, must be collected in appropriately labelled containers and disposed of properly.

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 H - Return form of Page IX).

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. Switch the hydraulic device CPU 520+S off (see Chapter 4.7 "CPU 520+S Switching off" on page 23).
2. Remove the hydraulic device CPU 520+S from all electrical connections and lines.

3. Remove the battery (EGO Power+ 56V ARC lithium™) from the hydraulic device CPU 520+S (see Chapter 4.8 "Removing the batteries" on page 24).

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

4. Empty the oil tank completely (see Chapter 4.6 "Draining hydraulic oil" on page 22).

NOTICE	**Dispose of the old oil in accordance with the national and international laws and regulations, and follow the manufacturer's disposal instructions.**

5. Dispose of the hydraulic device CPU 520+S at an approved recycling centre, or package the hydraulic device CPU 520+S and have it ready for collection.

NOTICE	**If packing the device(s) is not possible due to the dimensions, please note this in the “Special Instructions” section on the return form.** **The devices must be packed on the ground floor, or ready for collection on a pallet.**

9.1 Waste code numbers (WCN)

The information in this chapter is intended to ensure environmentally-friendly disposal of the CPU 520+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
13 01	Hydraulic oil waste
20 01 26	Oils and fats other than those falling under 20 01 25*.
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

Tab. 9-1 Waste code numbers (WCN) <continued>

Waste code numbers (WCN)	Waste designation
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 other than 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	Battery-powered high-pressure hydraulic equipment CPU (CPU 520+S)
Serial number	CPU 520 +S-0020

Tab. A-2 Technical data

Technical data	
Measures and weights	
Width	332 mm
Height	520 mm
Depth	435 mm
Weight (with hydraulic oil, without battery)	22 kg
Hydraulics	
Peak pressure	520 bar
Conveyor power	1.45 l/min
Tank volume	4 litres
Hydraulic medium	Hydraulic oil ISO VG 22
Drive	
Type of battery	EGO Power+ 56V ARC lithium™
Battery potential	56 V
Battery capacity	7.5 Ah / 10 Ah / 12 Ah
Motor rating	1.5 kW
Motor speed	3000 rpm

Tab. A-2 Technical data <continued>

Technical data	
Emissions	
At a pressure of 520 bar at a distance of 1 metre from the device, the A-weighted, guaranteed sound pressure level is 90 dB(A).	
Noise level (at 520 bar)	90 dB(A)
Temperature ranges/Operating conditions	
Ambient temperature when operating the machine	-10°C to +40°C
Ambient temperature when charging the batteries	+5°C to +40°C
Ambient temperature while in storage	5 °C to 30 °C (32 °F to 104 °F)
Minimum oil temperature	+10°C

ANNEX B - OVERVIEW DRAWINGS

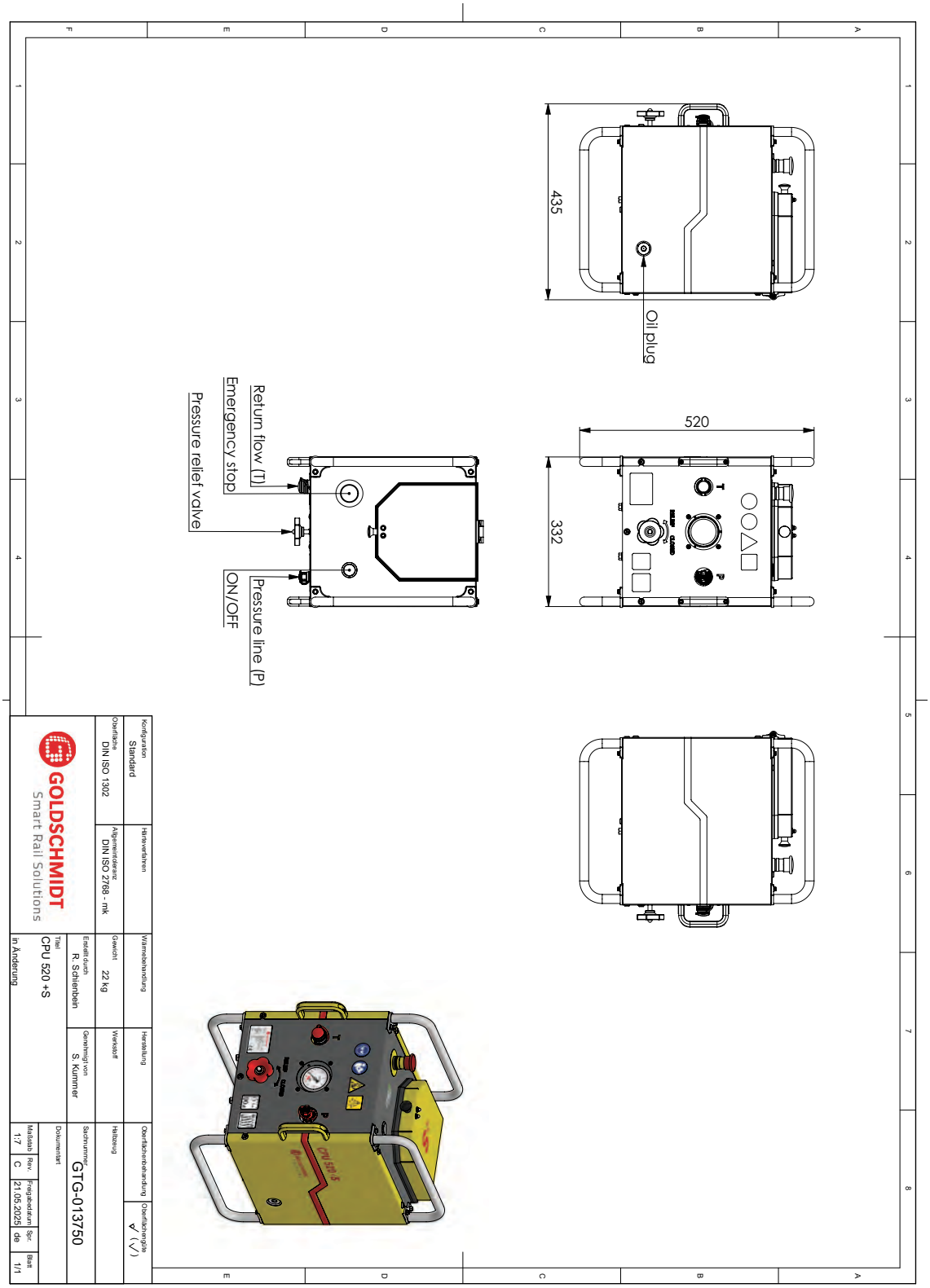


Fig. A-1 Overview drawings

ANNEX C - CIRCUIT DIAGRAM

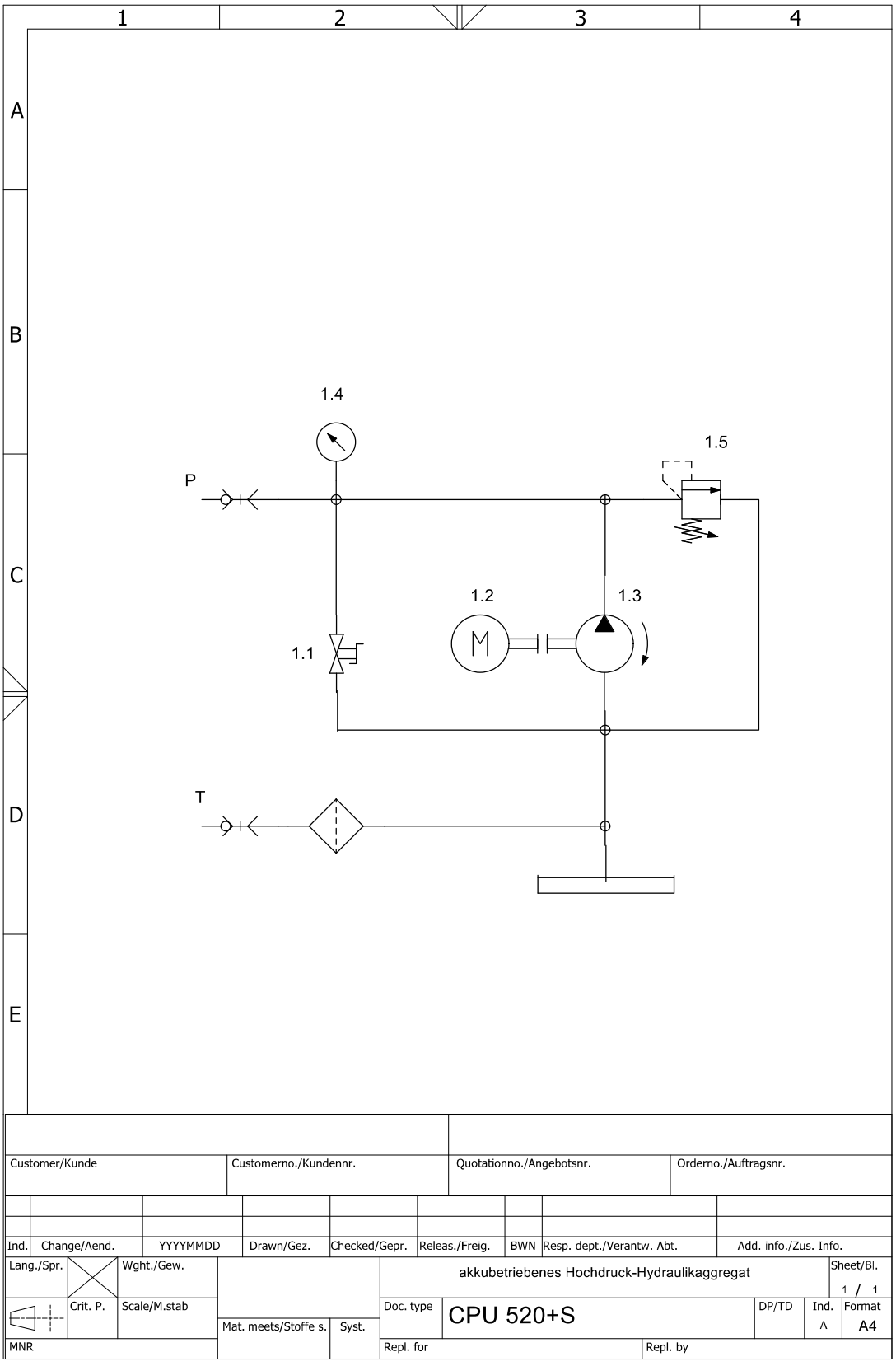


Fig. C-1 Hydraulic diagram

ANNEX D - DECLARATION OF CONFORMITY

TRANSLATION OF THE ORIGINAL DECLARATION

EC Declaration of Conformity

within the meaning of the EC Machinery Directive 2006/42/EC, Annex II, No. 1 A.

The manufacturer:

ELEKTRO-THERMIT GMBH & CO. KG
Chemiestraße 24
06132 Halle (Saale)

hereby declares that the following product

Model:	Battery-driven high-pressure hydraulic power unit
Product name:	CPU 520 +S
Serial number:	CPU520+S-XXXX (XXX consecutive number)
Year:	2024

complies with all relevant provisions of the Machinery Directive 2006/42/EC Annex I.

Applied harmonized 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 machinery and trolleys for construction and maintenance
EN ISO 4413:2010 Fluid power -General rules and safety requirements for hydraulic systems and their components
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 electrical appliances - Part 2: Immunity

Mr Ingolf Schöniger, Chemiestr. 24, 06132 Halle (Saale) is authorized to submit the technical documents.

Halle (Saale), 28th June 2024

Dr. Axel Hoeschen
Managing Director

ANNEX E - CERTIFICATION OF COMPLIANCE WITH 2000/14/EC

SLG Prüf- und Zertifizierungs GmbH

Certificate

Outdoor Noise Directive 2000/14/EC, Annex VI

Product:	Hydraulic power pack CPU 520+S
Trademark:	Goldschmidt
Technical data:	Power supply: EGO Power+ 56V-ARC-Lithium Battery
Categorie:	29 according to article 12 of directive 2000/14/EC
Manufacturer or authorised representative in the EU:	ELEKTRO-THERMIT GmbH & Co KG Chemiestraße 24 06132 Halle (Saale), Germany
Test report(s):	5041-24-AA-24-PB001
Certificate number:	11095706
Valid from:	2024-11-25
Valid until:	2027-11-24

The technical documentation of above mentioned products meet the requirements of Annex VI of the directive 2000/14/EC.

Average sound power level of all tested samples: **L_{WAm} = 87,1 dB**

Declaration of uncertainty acc. to ISO 7574-4:1985: K_{WA} = 2,7 dB

Observing all EC-Directives relevant for this product, providing the manufacturer's EC-Declaration of Conformity and quoting the suggested sound power level according to Directive 2000/14/EC the CE-Mark can be labelled.
The Notified Body will supervise the conformity of the manufactured devices with all technical documents with the help of checks according to Annex VI of the directive.

SLG Prüf- und Zertifizierungs GmbH SLG ZERTIFIZIERUNGS-STELLE

SLG project no.: 5041-24-AA

This certificate is based on the SLG Regulations for Testing and Certification of Products.

O. Schiller
Certification Body

SLG Prüf- und Zertifizierungs GmbH
Burgstädter Straße 20
09232 Hartmannsdorf · Germany
Tel.: +49 3722 7323-0
Fax: +49 3722 7323-899
service@slg.de.com
www.slg.de.com

ANNEX F - WARRANTY COVERAGE

For more information, please contact the customer service team (see Chapter 10 "Customer Service" on page 44)

ANNEX G - ACCESSORIES

When ordering accessories, you will need to provide the model and serial number of the hydraulic device.CPU 520+S You can find this information on the rating plate (please refer to Chapter 2.4.1 "Rating plate" on page 7).

Tab. G-1 Accessories

Accessory	Quantity
700 W RAPID+ CH7000E charger	1
Double nipple 3/8NPT to 1/4 CMS	2
EGO Power+ 56V ARC lithium™ (12 Ah)	1
HD hose 7000 mm CMS	2
Coupling sleeve G1/4in. Flat face	3
Coupling connector G1/4in. Flat face	3
Hydraulic oil, Renolin B5	5 L
PE funnel, 100 mm	1

ANNEX H - RETURN FORM

GOLDSCHMIDT
Smart Rail Solutions

Request for the return and disposal of B2B electrical waste equipment

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

General company information
Company name:
Street, house number:
Additional information (building/entrance/floor):
Postcode, town:
VAT ID:

Main contact Last name, first name: Email:
Telephone number:

Alternate contact person Surname, first name: Email: Telephone number:

Billing address
Company name:
Street, house number:
Postcode, town:
Email
Telephone number:

Device(s) for collection
Product name: Brand:
Serial number:
Quantity (units):
Total weight (kg):

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