

INSTRUCTIONS MANUAL

HOSE PRESS ELECTRO-HYDRAULIC

2480.00.54.20



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Hose press electro-hydraulic

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1 INTRODUCTION

Read through these instructions carefully before use and store them.

These instructions contain the following important information on the product:

- Proper use
- Safety
- Mounting
- Use
- Maintenance
- Disposal

Proper use also involves

- Reading these instructions
- Complying with the safety information they contain
- Complying with the applicable documents
- Complying with the maintenance requirements

Give these instructions to the user after mounting is complete, and give them to the new owner if the product is sold.

1.1 Definition

The Hose press electro-hydraulic product is a machine in terms of 2006/42/EC, section 1a and 2a.

In the following text of these instructions, the product is referred to as machine.

According to this directive, the hose press is to be categorised in the group of devices referred to as "hand-guided machines"

1.2 Intended use

The machine is for the pressing of micro measuring and mini measuring hose connection systems.

The intended use also includes

- reading of these instructions and the adherence of safety information.
- the adherence of all applicable documents.
- adherence to the maintenance regulation.

The machine may only be used as intended. Only processes and handling may be used as described in these instructions.

1.3 Incorrect application

Any use which goes beyond the intended use of the machine and therefore classed as misuse and not allowed.

The machine may not be stressed beyond its limits.

The machine is not suitable for:

- use in an explosive atmosphere.
- the operation with impermissible changes or alterations (see chapter 5.3 "Making the press connection" on page 16).
- stationary operation while clamped.
- long-term operation. After 50 pressings in a row, a cooling-off period of at least 15 minutes must be given.
- operation in heavy rain or underwater.

For all damage to persons or property which has been caused by improper use, the liability lies with the operator of the machine described in this document.

1.4 EC declaration of conformity

All machines have a EU declaration of conformity when supplied as per the directive 2006/42/EG (machine directive). The excerpt of the text in this EU declaration says:

EU declaration of conformity as per directive 2006/42/EG, annex II A (machinedirective)

Manufacturer

FIBRO GMBH
August-Läpple-Weg
DE 74855 Hassmersheim

declares herewith that the machine

Hose press

that the models introduced to the market correspond to all relevant regulations of directive 2006/42/EG.

The machine also corresponds to all relevant regulations of further directives applied to the machine.

Applied harmonised standards:

DIN EN ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

Authorised for the compilation of the Technical Documentation is:

FIBRO GMBH August-Läpple-Weg DE 74855 Hassmersheim

1.5 Further applicable documents

In addition to these instructions for the safe handling of the machine further, with applicable documents are necessary.

The information in these documents have to be adhered to.

- EU declaration of conformity as per directive 2006/42/EG
- Pneumatic plan

2006/42/EC Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) (1)

1.6 Warranty

The guarantee is regulated contractually (see Terms and Conditions or contract).

Warranty and liability claims for personal injury or material damage are excluded when they result from one or more of the following causes:

- Improper use of the machine.
- Improper operation or servicing of the machine or improper commissioning.
- Non-observance of the information in the operating instructions regarding transport, storage, commissioning, operation and maintenance of the machine.
- Unauthorised modifications to the machine.
- Catastrophes caused by foreign bodies or superior force.
- Inadequate monitoring of machine parts that are subject to wear.
- Improperly performed repairs.

1.7 Manual

These instructions describe the handling of the machine and contain important information about its intended use.

A copy of these instructions must be stored and made continuously available at the operating site of the machine, and everyone assigned to work on or with the machine must read, understand and apply them.

The safety information in the individual chapters must be observed.

These instructions and the other applicable documents are not subject to any modification service.

We reserve the right to update data and drawings in these instructions based on continuing technical development.

The respectively current version can be requested from FIBRO GMBH.

1.8 Legend

Certain marks, symbols and abbreviations with the following meaning are used in these instructions for clear organisation of its contents:

- 1) indicates an enumeration.
 - a) indicates the second level of an enumeration.
- indicates a listing.
 - indicates the second level of a listing.



The book icon in front of the text is a reference to an applicable document or another chapter in these instructions. The content of this document or chapter must be observed.



The information symbol before the text indicates an additional instruction or an important application tip.

1.9 Figures

The figures in these instructions are examples. Deviations between a figure and the actual conditions on the machine are possible.

The drawings of FIBRO GMBH and the information on third-party products are decisive.

2 SAFETY

2.1 Safety information

Most accidents when handling technical equipment are due to disregarding the basic safety instructions.

Recognising a possible hazard can prevent an accident happening. If there are hazards, the safety information on the machine and in these instructions provides warnings about these hazards. Disregarding the safety information can lead to serious injuries or even death. FIBRO GMBH cannot foresee all possible circumstances that can lead to potential hazards. Therefore, the warnings in these instructions and on the machine do not include all hazards.

The machine may not be used in any way that deviates from the instructions in these operating instructions. All safety rules and safety measures, including the site-related regulations and safety measures at the workplace that are applicable to its use, must be observed.

The information, descriptions and figures in these instructions are based on the information that was available at the time of creation of these instructions.

2.1.1 Due diligence of the operator

This machine is designed and manufactured by FIBRO GMBH according to the state of the art. The requirements for ensuring safety and protection of health have been fulfilled.

However, this safety can be achieved in operational practice only when all required applicable measures have been taken. The operator of the machine must plan these measures and control their implementation.

The operator is responsible for the safe operation of the machine.

The operator must make sure that

- the machine is used only as intended
- the machine must be operated only in a fully functional state with all mechanical and electrical safety devices in place
- a copy of these instructions and of all other applicable documents is always available in a complete and legible condition at the operation site of the machine. All persons required to work with the machine must be able to consult these instructions at any time
- only personnel in accordance with 2.1.2 "Personnel requirements" is used at the machine
- personnel are familiar with these instructions, in particular with the safety information contained therein
- the responsibilities of this personnel are clearly defined and observed
- personnel are regularly instructed in all applicable issues related to occupational health and safety and environmental protection
- all danger signs fitted to the machine have not been removed and remain legible
- operating instructions related to the work safety and accident prevention are enacted
- national accident prevention regulations and company regulations are complied with
- personal protective clothing is available where required

2.1.2 Personnel requirements

The following safety instructions must be observed in all operations on the machine. Disregarding the safety instructions can lead to serious injuries or even death.

Personnel must have the necessary training and experience and possess the necessary tools in order to be able to perform the work on the machine correctly. Improperly performed work can be dangerous and cause serious or fatal injuries.

Do not perform any work if you have not read and understood the information in these instructions and in the applicable documentation.

If work equipment, operation, work methods or work techniques that have not been explicitly proposed by FIBRO GMBH are used, the operator must himself ensure the safety for himself and for other persons.

It must be ensured that the machine is also not damaged or does not become unsafe over the course of the intended work.

All persons working on and with the machine must

- have read and understood these instructions
- observe the safety information and guidelines in the operating instructions and the instructions contained therein
- observe the danger signs attached to the machine and the instructions on them
- observe the warning information about possible residual risks
- make sure that there are no unauthorised persons in the vicinity of the machine.
- in addition to the operating instructions, observe also the operating instructions for occupational health and safety and accident prevention issued by the operator
- inform the operator or the supervisory personnel about any malfunctions
- inform the respective managers immediately about any changes to the machine which can affect its safety

2.2 Residual risks

WARNING!

Higher pressing pressure

Non-metallic workpieces may be overloaded by the pressing process in a way that leads to sudden failure. Splinters of rapidly accelerated workpiece parts pose a high potential risk for the operator and persons outside of the working area.

- ▶ Danger of injury from flying workpiece parts.

WARNING!

Unauthorised modifications

Any unauthorised modifications or any mounting of additional equipment not approved by FIBRO GMBH may compromise the function of the machine and result in dangerous situations.

- ▶ Alterations or unauthorised modifications to the machine are forbidden.
- ▶ The mounting of additional equipment must be discussed with FIBRO GMBH.
- ▶ Unauthorised modifications can endanger the safe operation of the machine and can lead to severe injuries or even death.

3 PRODUCT DESCRIPTION

3.1 General technical data

Name	Value
Pressing time	3 - 4 s
Linear thrust	15 kN
Battery voltage	18 VDC
Battery capacity	1.5 Ah
Battery charge time	15 min
Pressings per charge	150
Oil types	Rivolta S.B.H. 11
Sound pressure level	70.6 dB A
Ambient temperature	-10.....+40 °C
Vibrations	< 2,5 m/s ²
Weight including battery	2,3 kg

Using the hose press, two different hose connection systems can be pressed.

Hose connection system	
2480.00.23.	Minimess system
2480.00.27.01.	24° conus micro system

3.1.1 Type plate



The type plate is located in the battery compartment. The information on the type plate must be specified for all queries and orders.



3.2 System structure and equipment

The illustration shows a schematic diagram of the principal set-up of the machine.

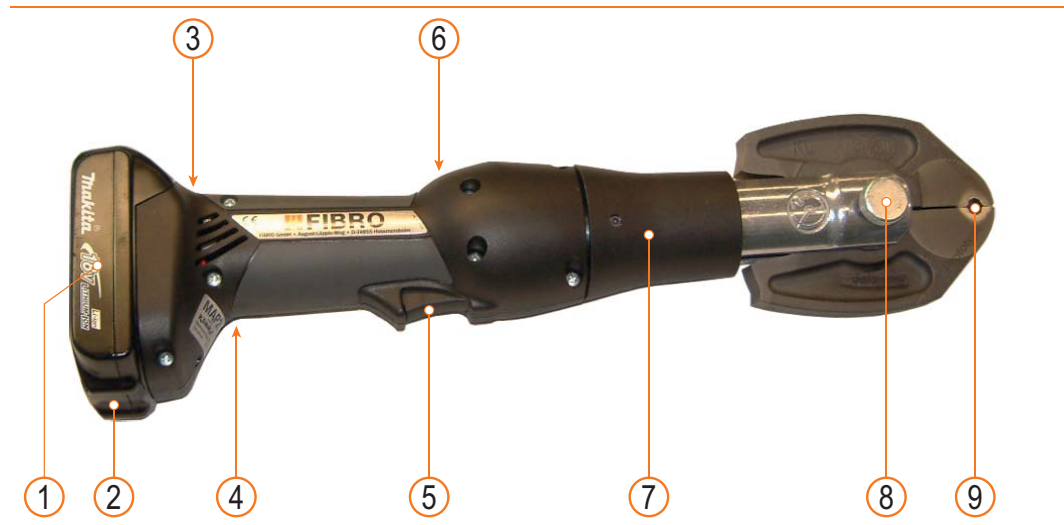


Fig. 3-1 Set-up

- 1 Battery
- 2 Battery release
- 3 LED (red)
- 4 LED (white)
- 5 Control switch
- 6 Reset slide unit
- 7 Packer
- 8 Locking bolts
- 9 Press tool

3.3 Function

The machine is delivered ready for operation. After charging the battery, the machine can be operated manually.

The electro-hydraulic drive enables simple and rapid hose assembly.

3.3.1 Safety features

The press tool is fitted with an overtravel stop, which immediately stops the feed after release of the control switch.

An LED illuminates the working area after activation of the control switch and switches off again after 10 s.

Hydraulic Pressure Check (HPC) checks the oil pressure directly in the oil circuit and therefore provides a continuous even quality in the pressings.

During each press cycle, the pressure reached is calculated using a pressure sensor and equalised with the required minimum value. In the event of deviations from the working pressure set, an acoustic warning signal is sounded.

3.3.2 Functional features

The press tool features an automatic return which automatically returns the piston to the starting position after the maximum operating overpressure is reached.

A manual return allows the operator to return the piston to the starting position in the event of an incorrect pressing.

The packer can be continuously rotated 350° around the longitudinal access. This allows installation even in positions with very poor access.

The press tool is fitted with a microprocessor control, which e.g. indicates the charge of the battery and conducts a fault analysis during which the operator is informed by various acoustic and optical warning signals of the nature of the fault.

After the pressing process the motor is switched off by the energy saving function.

The compact, ergonomic housing consists of 2 components. The handle area is particularly slip-resistant due to its rubberised surface, and together with the balance-optimised housing, the tool sits very well in the hand and allows for fatigue-free work.

All functions can be controlled through a control knob.

Through the use of Li-ion batteries, the machine remains ready for use even after long periods of inactivity.

The oil used is a rapidly biodegradable and non-water toxic high-performance hydraulic oil. The oil is suitable for very low temperatures and has excellent lubricating properties.

By means of a USB adapter (accessories), a record can be created after the work has been completed on the proper functioning of the machine.

4 TRANSPORT

4.1 Packaging and weight

The machine is packaged into a box for shipping. The weight of the entire packaging unit is 6 kg.

4.2 Transport damage

On delivery, the consignment must be checked immediately to ensure that it is complete and has not been damaged in transit. If damage is found on the packaging that indicates possible damage to the contents, the contents must also be inspected for damage.

If damage is found, the transport company must be informed immediately and the transport company must verify the damage.

4.3 Interim storage

- Only store the machine when dry, in its original packaging and in enclosed rooms
- Storage temperature +5 - +40 °C
- Maximum humidity 60% (at 25 °C)
- No aggressive substances may be stored in the storage room (acids, bases, solvents etc.).

4.4 Return shipping

For the returns the parts which have to be sent back to the manufacturer for repair have to be packaged securely.

4.5 Disposing of the packaging material

The packaging materials must be either reused or properly disposed of in accordance with the country-specific regulations.

5 OPERATION

5.1 Important safety instructions

WARNING!

Crush hazard

The press tool generates a high level of mechanical pressure.

- ▶ When pressing, never reach between the press clamps.
- ▶ Fingers can be crushed or cut off.

Please ensure when operating the machine that the

- operating staff has been informed about the proper conduct in the event of a machine failure.
- machine is only operated by staff that has been trained, instructed and authorised to do so. These persons have to know the instructions and act accordingly
- machine is only operated according to its intended use (see chapter 1.2 "Intended use").
- operating instructions of the operator are adhered to.

5.2 Before operation

A visual inspection has to be carried out prior to commissioning the machine. The following has to be checked and ensured:

- there is no damage to the machine.
- the battery is charged.
- the press tool is correctly inserted.

5.2.1 Charging the battery



One charger for the battery is included in the scope of delivery.

1. To release the battery, press the release button on the hose press and pull out the battery.
2. Insert the mains plug of the charger into a mains socket.
3. Insert the battery into the charger.
 - a) The charge level is displayed by the light diodes on the charger.
4. Press the battery release on the charger and remove the charged battery.
5. Slide and snap in the charged battery into the guide on the hose press.



Fig. 5-1 Charging the battery

5.2.2 Inserting the press tool



A standard press tool is contained in the scope of delivery.

1. Open the locking bolts
 - a) Press down the handle and turn anticlockwise 45°.
 - b) Release the handle.
 - c) The locking bolt is unlocked and opened by the spring force.
2. Insert press tool.
3. Close the locking bolts.
 - a) Press down the handle and turn 45° clockwise.
 - b) The locking bolts are locked.

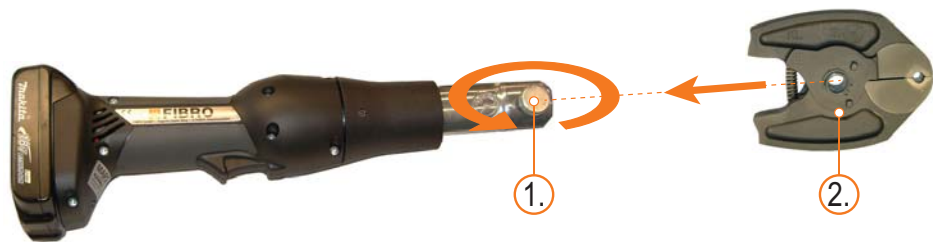


Fig. 5-2 Inserting the press tool

5.3 Making the press connection

NOTICE

Overly intensive use can cause the machine to overheat.

- ▶ After 50 pressings in a row, a cooling-off period of at least 15 minutes must be given.
- ▶ Material damage to the machine.

5.3.1 Processing instructions

To ensure proper pressing and guarantee operational and functional safety in its use, the machine may only be used with press clamps/press inserts approved by FIBRO GMBH.

Only press clamps/press inserts with permanent labels stating the manufacturer and type may be used.

5.3.2 Available hoses, threaded connections and hose fittings

The following hoses, threaded connections and hose fittings can be ordered:

Minimes-System		
Hose 630 bar dimpled	DN2 *	2480.00.23.00.
Threaded connection, straight, packed	DN2-1215	2480.00.23.01.V
Threaded connection, 90°, packed	DN2-1215	2480.00.23.02.V
24° conus micro system		
Hose 630 bar dimpled	DN2 *	2480.00.23.00.
Threaded connection, straight, packed	DN2-1215	2480.00.27.01.V

* Hose lengths in 1 m steps, ordered.

e.g. Ordering example Hose DN2, 10 m lengths = 2480.00.23.00.0010

To shorten a hose, hose shears should be used.

Suitable hose shears can be ordered from FIBRO GMBH using order number 2480.00.54.03.



Fig. 5-3 Hose shears

5.3.3 Pressing the hose



The work steps for pressing are the same for all hose connection systems.

It is important that pressing is always performed in the middle. Press operations for which the hose fitting is placed too far outside the middle will lead to a tapered press fitting and thus to increased wear.



The connections or fittings are always pressed onto a hose in two steps. First, one end of the hose is prepared and pressed, then the other end.

WARNING!

Shearing of fingers

The machine may not be operated without press clamps.

NOTICE

The pressing process can be interrupted at any time by releasing the control switch. However a precondition for continuously compact pressing is that the pressing process is always brought to an end, i.e. the press clamps close completely and then automatically reopen. Pressings in which the pressing process was interrupted must be repeated.

1. Cut the hose to the necessary length.
2. Pull the protective cap, if needed, over the hose.
3. Attach the press sleeve, if needed, onto the end of the hose.
4. Place the threaded connection or hose fitting into the end of the hose.
 - a) The end of the hose has thus been prepared and can be pressed.

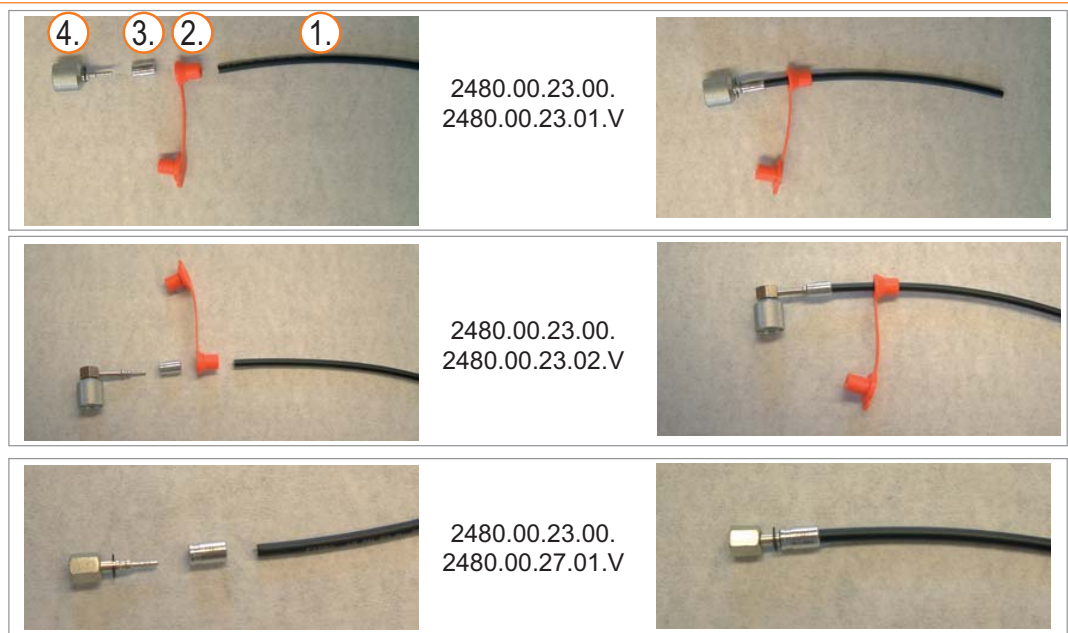


Fig. 5-4 Preparing the hose



In the home position, the press tool is open.

5. Insert the prepared hose into the press tool and bring into the pressing position.
6. Activate and hold the control switch.
 - a) The pressing process is automatically ended when the press fit is reached.
 - b) The press tool opens automatically.
7. Remove the hose from the press tool.

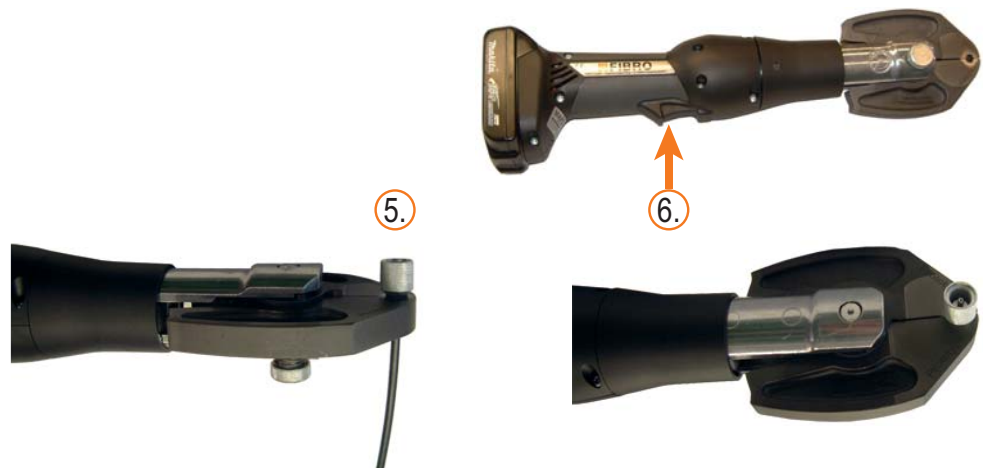


Fig. 5-5 Pressing the hose

8. Repeat steps 2 to 7 on the second hose end.

NOTICE

After the pressing process, the press fit must be inspected.

6 FAULTS

6.1 Important safety instructions

 **WARNING!**

Non-authorized staff

Staff which hasn't been trained accordingly has not the necessary authorities, to find faults or to remove faults.

- ▶ Faults may only be removed by FIBRO customer service or by staff of the operator which has been trained and authorised to carry out these activities.
- ▶ Before removing the faults, the machine has to be separated from the pressurised air supply.
- ▶ If using non-authorized staff, wrong action may cause injuries.

6.2 Table of faults

Event	Fault = > remedy
Red LED permanently lit	Battery is empty => charge battery
Red LED flashes once and sounds a warning signal at the same time	The required pressure was not reached or the pressing process was manually interrupted => repeat pressing process
Red LED flashes for 20 seconds at 2 Hz	Major fault => send in the hose press
Red LED flashes for 20 seconds at 5 Hz	Overheating => allow the hose press to cool down
Red LED flashes twice after battery inserted	Not a fault => self test
Red and white LED flash 3 times and sounds 3 warning signals at the same time	Major fault Occurs once: => repeat pressing process Occurs repeatedly: => send in the hose press
The hose press is losing oil	Leakage => send in the hose press

6.3 Customer services

If you should require the assistance of our customer service we would ask you to provide the following information:

- Serial number from type plate FIBRO GMBH (see chapter 3.1.1 "Type plate" on page 11)
- Description of the current fault
- Time and circumstances of fault
- Suspected cause

You can reach our customer service Monday to Friday from (times are UTC + 1) 7 am to 5 pm on **service number** +49 (0) 62 66 73 0

Outside of the stated time, there is an automatic message with further information.

Customer service address:

FIBRO GMBH

August-Läpple-Weg

DE 74855 Hassmersheim

info@fibro.de

On www.fibro.de you can find all FIBRO subsidiaries worldwide.

7 SERVICING

7.1 Important safety instructions

 **WARNING!**

Switch machine off safely

Work with the machine turned on is dangerous.

- ▶ Before performing work, the machine must be separated from the compressed-air supply.
- ▶ In general, work may only be performed with the machine switched off and depressurised.
- ▶ Injury with the machine switched on.

 **WARNING!**

Non-authorized staff

Only the work described in these instructions with regards to the maintenance may be carried out by the staff of the operator.

- ▶ This staff has to be trained and authorised for the intended tasks.
- ▶ All further work and repairs may as a rule only be carried out by FIBRO staff.
- ▶ If using non-authorized staff, wrong action may cause injuries.

7.2 Maintenance work

The following tasks are considered maintenance work:

- Inspection
- Maintenance / cleaning
- Repair

7.3 Inspection

7.3.1 Prior to each use

- Control of the essential functional units.
- Check for damage, leakage and loose components.
- Control the cleanliness.
 - Clean machine if necessary.
 - Blow out material debris (press tinder of the press sleeve) from the press tool with compressed air.

7.4 Maintenance

Maintenance work should be performed on the machine by the operating company.

As part of the intended use, the operator may only change the press tool.

Steps to be taken by the operator to maintain and ensure proper functioning:

- The machine must be cleaned after every use. Before storage, ensure the machine is dry.
- Annually, or after 10,000 pressings, the machine should be sent in for maintenance or service.
- The bolt connections, the drive rolls and their guides as well as the moving parts of the press tool are easy to lubricate.
- Check the machine is working correctly regularly by carry out a test pressing.
- Always keep the press tool clean. In the event of soiling, clean with a brush.

7.5 Repairs

The operator should not carry out repair work on the machine.

If repair measures are necessary, then FIBRO GmbH's customer service has to be notified.

8 DISASSEMBLY AND DISPOSAL

8.1 Disassembly

- Remove battery
- Remove press tool

8.2 Disposal

NOTICE

Dispose of assemblies correctly!

Incorrect disposal of assemblies can cause environmental damage and lead to prosecution. In any case, the assemblies must be disposed of in accordance with the relevant national and regional laws and guidelines. Care must be taken to ensure the environmentally-friendly disposal of the process materials.

- ▶ Local regulations for the correct recycling and disposal of waste must be adhered to.

Information about waste disposal sites and collecting point can be obtained from the local administration.

The machine consists of:

- Iron / steel
- Plastic
- Battery

9 SERVICE AND SPARE PARTS

9.1 Service

The operator should not carry out repair work on the machine.

If repair measures are necessary, then FIBRO GMBH's customer service has to be notified.

You can reach our customer service Monday to Friday from (times are UTC + 1) 7 am to 5 pm on **service number** +49 (0) 62 66 73 0

Outside of the stated time, there is an automatic message with further information.

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