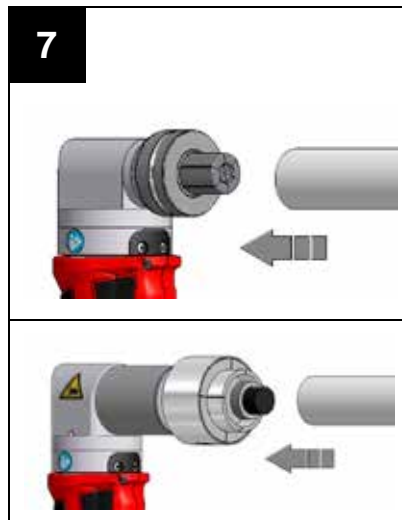
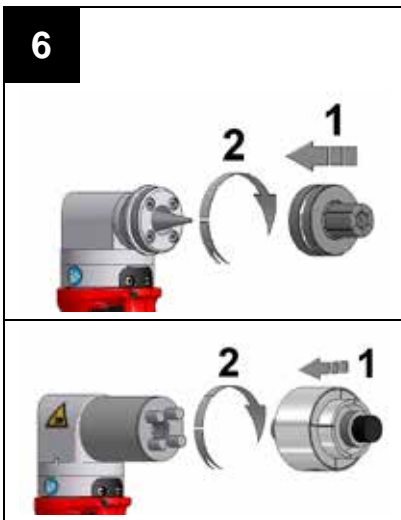
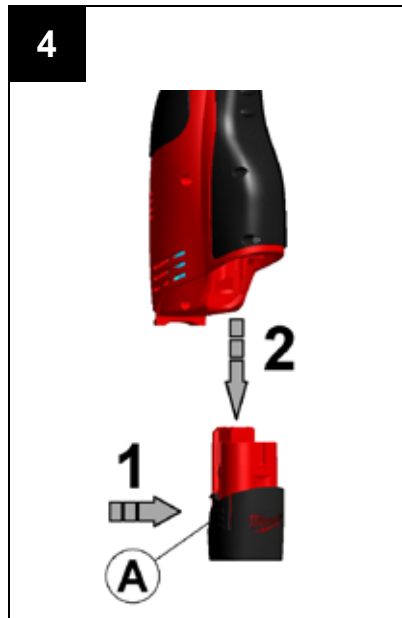
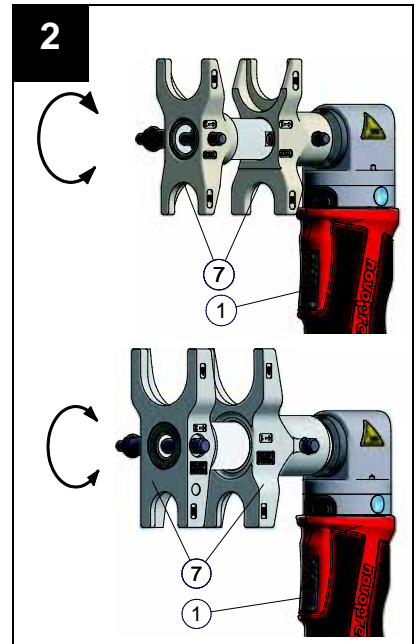




AXI102

AAP102

DE	Betriebsanleitung
EN	Operating Manual
FR	Manuel d'utilisation
IT	Manuale d'istruzioni
ES	Instrucciones de uso
NL	Handleiding
SV	Bruksanvisning
FI	Käyttöohje
NO	Bruksanvisning
PT	Manual de instruções
DA	Betjeningsvejledning
EL	Οδηγίες λειτουργίας
RU	Инструкция по эксплуатации
PL	Instrukcja obsługi
CS	Návod k obsluze
HU	Használati utasítás
ZH	操作说明书



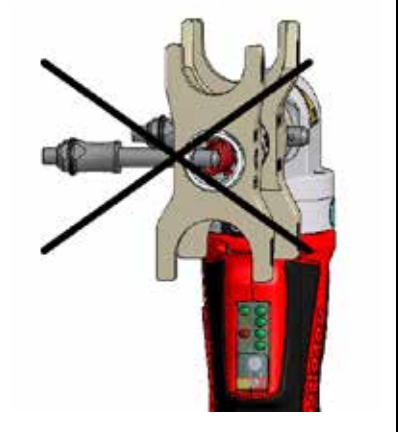
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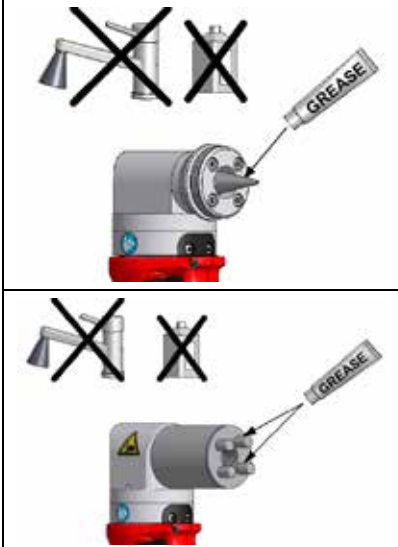
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16



AXI102 / AAP102

EN English

Translation of the Original Instructions

Contents

1	Proper use	13
2	Basic safety information	13
3	Definition of terms.....	15
4	Symbols on the device and information on the rating plate	15
5	Scope of supply	16
6	Technical data	16
7	Brief description.....	17
8	Start-up and operation of AXI102.....	19
9	Start-up and operation of AAP102	20
10	Cleaning, maintenance and repair	22
11	Disposal.....	23
12	Warranty and guarantee.....	23
13	EU Declaration of Conformity.....	24

1 Proper use

The expanders and pusher tools are intended solely for use with expander heads or adaptors that have been declared suitable by Novopress in consultation with system suppliers.

The expander with the appropriate expander heads from the system manufacturer are intended exclusively for expanding pipes that are suitable for these expander heads.

The pusher tool and adaptors are to be employed solely for the pressing of pipes and fittings for which these adaptors have been designed.

Any use beyond or different to that described shall be regarded as improper use.

Proper use also includes compliance with the Operating Manual, adherence to the inspection and maintenance conditions as well as compliance with the latest versions of all relevant safety regulations.

Any work with this tool that does not correspond to proper use may lead to damage to the expander or pusher tool, the accessories or the pipes. Leaks and/or injury may result.

Novopress is not liable for damage resulting from

- the use of unsuitable expander heads or adaptors from other manufacturers, or
- applications that do not conform to proper use.

2 Basic safety information

The following pictograms are used to highlight sections of text. Please follow these instructions and act with particular caution in these cases. Pass all health and safety instructions on to other users and technicians.



WARNING!

This information indicates a potentially dangerous situation that could result in serious injury or death.



CAUTION!

This information indicates a potentially dangerous situation that could result in minor injuries and/or material damage.

	<p>Information!</p> <p>This information is directly linked to the description of a function or an operating sequence.</p>
--	--

**Please read this Operating Manual carefully.
The safety instructions it contains must be observed.
Compliance with local safety regulations is essential!**

 	<p>WARNING!</p> <p>Read all safety warnings and all instructions.</p> <p>Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.</p> <p>Therefore:</p> <ul style="list-style-type: none"> – Save all warnings and instructions for future reference.
------	---

 	<p>WARNING!</p> <p>Risk of injury from ejected fragments</p> <p>Incorrect or improper use or the use of worn or damaged tools and devices carries a risk of injury from ejected fragments.</p> <p>Therefore:</p> <ul style="list-style-type: none"> – Tools and devices may only be used by trained personnel. – Compliance with the specified service work and service intervals is mandatory. – Check the tools and devices for cracks and other signs of wear before each use. – Separate all tools and devices with material cracks or other signs of wear immediately and do not use them any longer. – Only use tools and devices that are in perfect technical condition. – Following incorrect use, do not use the tool and device any longer and have them inspected by an authorised workshop.
------	--

	<p>CAUTION!</p> <p>Unskilled use may lead to a damaged or malfunctioning tool and device.</p> <p>Therefore:</p> <ul style="list-style-type: none"> – Replace worn tools immediately and do not use them any longer. – Use carrying cases for transport and storage and keep tools and the device in a dry room. – Have damage checked immediately by an authorised workshop. – Comply with the safety instructions regarding the cleaning and anti-corrosion agents used.
--	---

	<p>Information!</p> <p>Consult the documents provided by the system supplier for handling and assembly instructions for fittings and pipes.</p>
--	--



3 Definition of terms

V	volt
A	ampere
Hz	hertz
W	watt
kW	kilowatt
g	gram
kg	kilogram
Bj	year of manufacture

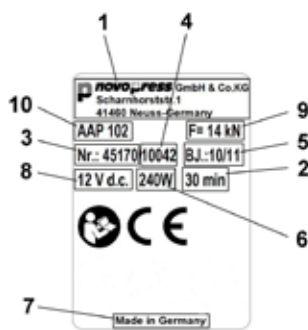
Ah	ampere hour
db(A)	decibel (sound pressure)
bar	bar
°C	degree Celsius
kN	kilonewton
a.c. / ~	Alternating current voltage
d.c. / ≡	Direct current voltage
F	force

∅	diameter
h	hour
min	minute
s	second
m/s ²	metre divided by square second (acceleration)
Nr	number

4 Symbols on the device and information on the rating plate

Symbol	Meaning
	Warning: Danger of crushing
	Service sticker; indicates when the next service is due.




Information on the rating plate






1	Manufacturer logo incl. address
2	Permissible uninterrupted operating time
3	Part No.
4	Serial No.
5	Year of manufacture mm.yy

6	Power consumption
7	Country of manufacture
8	Permissible voltage range in volt
9	Nominal force
10	Type designation of device

Explanation of possible pictograms on the rating plate

	Verification marking Canada/ USA
	Verification marking Canada/ USA
	Registration of products on the uniform customs territory

	Verification marking Australia
	CE conformity marking product safety in Europe
	Read Operating Manual

5 Scope of supply

The scope of supply for the standard equipment includes:

AXI102	AAP102
Expander incl. operating manual	Pusher tool incl. operating manual
Battery charger incl. operating instructions	Battery charger incl. operating instructions
Battery 12 V DC	Battery 12 V DC
Safety instructions	Safety instructions
EU Declaration of Conformity	EU Declaration of Conformity
Carrying case	Carrying case

Optional additional accessories (e.g. expander head, adaptor) may also be included. Please contact the system supplier for information on the scope of supply.

6 Technical data

AXI102 expander without expander head

Product number:	45200	45222	45250	45255	47492
Expander cone pitch:	20°	18°	18°	--	18°
Expansion stroke:	20 mm	25 mm	25 mm	25 mm	23,5 mm
Expansion range:	In accordance with information from the system manufacturer				
Rated voltage/battery:	12 V DC (lithium-ion) / M12 (Milwaukee)				
Power consumption:	240 W				
Nominal force:	10 kN	10 kN	10 kN	24,5 kN	16 kN
Height without battery:	324 mm	324 mm	324 mm	330 mm	333 mm
Length without battery:	119 mm	131 mm	131 mm	132 mm	122 mm
Width:	69 mm	69 mm	69 mm	69 mm	69 mm
Weight without battery:	1,7 kg	1,75 kg	1,76 kg	2,27 kg	1,95 kg
Max. noise level:	86,5 db(A) ¹⁾				
Noise pressure level at user's ear:	75,5 db(A) ¹⁾				
Vibration value:	<2,5 m/s ² ²⁾				
Type of protection:	IP20				
Temperature range during operation:	-10°C to +50°C				

AAP102 pusher tool without adaptor

Product number:	45170	45225	45230	46330	47140	47501
Adaptor mount:	Ø27 mm	Ø33 mm	Ø33 mm	Ø29,6 mm	Ø36 mm	Ø33 mm
Pushing range:	In accordance with information from the system manufacturer					
Working stroke:	Depends on system manufacturer					
Rated voltage/battery:	12 V DC (lithium-ion) / M12 (Milwaukee)					
Power consumption:	240 W					
Nominal force:	14 kN	17 kN	23 kN	19 kN	38 kN	19 kN
Height without battery:	325 mm	354 mm	330 mm	330 mm	338 mm	330 mm
Length without battery:	195 mm	277 mm	219 mm	212 mm	207 mm	219 mm
Width:	69 mm	89 mm	69 mm	69 mm	69 mm	69 mm
Weight without battery:	2,1 kg	3,3 kg	2,34 kg	2,3 kg	2,7 kg	2,4 kg
Max. noise level:	86,5 db(A) ¹⁾					
Noise pressure level at user's ear:	75,5 db(A) ¹⁾					
Vibration value:	<2,5 m/s ² ²⁾					
Type of protection:	IP20					
Temperature range during operation:	-10°C to +50°C					

1) Measurement uncertainty 3 db(A)

2) Measurement uncertainty 1,5 m/s²



Information!

Wear hearing protection.

The stated vibration emission value was measured using a standard test procedure and can be employed for the purpose of comparison with another device.

The stated vibration emission value can also be used to obtain an initial estimate of interruptions during intermittent operation.

Caution The vibration emission value may differ from the stated value while the device is actually in use, depending upon the manner in which the device is used. It may be necessary to establish safety measures to protect operating personnel, depending on the actual conditions of use (intermittent operation).

Battery charger

For information on the function and operation of the battery charger and the rechargeable batteries, please consult the battery charger operating instructions.

7 Brief description

7.1 AXI102 expander (Fig. 1)

- 1 Start button
- 5 Release button
- 7 Expander head
- 14 Battery

7.1.1 Automatic press cycle (Fig. 1)

The expander features positive control. During expansion, the expander remains in the position reached, even if the start button (1) is temporarily released. When the intended switch-off force is achieved, it is perceptible by means of an increase in the motor speed and a discernible decrease in pressure. When the start button (1) is released, the device returns to its initial position. For safety

reasons, the positive control is only activated after a minimum force has been attained. Until this force is achieved, the expansion process can be interrupted at any time by releasing the start button (1). The device then automatically returns to its initial position.

7.1.2 Release button (5) (Fig. 1)

The release button (5) is used to return the tool to its initial position before the expansion process has been completed. In order to do this, press the release button (5) until the expander head (7) has moved back completely.

7.2 AAP102 pusher tool (Fig. 2)

- 1 Start button
- 5 Pusher adapter
- 7 Expander head
- 14 Battery

7.2.1 Automatic press cycle (Fig. 2)

The pusher tool features positive control. During compression, the pusher tool remains in the position reached, even if the start button (1) is temporarily released. When the intended switch-off force is achieved, it is perceptible by means of an increase in the motor speed and a discernible decrease in pressure. When the start button (1) is released, the device returns to its initial position. For safety reasons, the positive control is only activated after a minimum force has been attained. Until this force is achieved, the pressing operation can be interrupted at any time by releasing the start button (1). The device then automatically returns to its initial position.

7.2.2 Release button (5) (Fig. 2)

The release button (5) is used to return the tool to its initial position before the pressing operation has been completed. In order to do this, press the release button (5) until the pusher adaptor (7) has moved back completely.

7.2.3 Rotatable head (Fig. 2)

The pusher tool is equipped with a rotatable head. It cannot be rotating during the pressing operation.

7.2.4 Pusher adaptor (Fig. 3)

The nominal width and the name of the system supplier are inscribed on the pusher adaptors. Furthermore, an arrow indicates the installation direction and a number indicates the order. If the nominal widths for a size are aligned with each other, the arrows and the numbers will be in line.

7.3 Battery

Removing the battery (Fig. 4)

Push in (1) the two release buttons (A) and then remove the battery (2).


Inserting the battery (Fig. 5)


Slide the battery into the device as illustrated until it clicks into place.


Battery charge indicator (Fig. 1)

The 4 green LEDs (4) indicate the charge level of the battery. The number of LEDs lit up denotes the battery charge. If the LED (2) is flashing, the battery is empty and no further travel is possible.

7.4 AXI102 and battery

	<p>Information!</p> <p>The AXI102 expander and AAP102 pusher tool must only be operated with 12 V DC lithium-ion rechargeable batteries. The 12 V battery must only be used in the appropriate press devices.</p>
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	<p>Information!</p> <p>The batteries are not charged at the factory. Therefore:</p> <ul style="list-style-type: none"> – Charge the batteries before using for the first time.
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	<p>Information!</p> <p>Limited temperature range for charging and storing the batteries. Therefore:</p> <ul style="list-style-type: none"> – It is imperative that the operating instructions for the battery charger are complied with.
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Feature of the press device after extended periods out of use or when changing the battery:

If the press device is out of use for approx. 30 minutes or the battery is reinserted, it switches off. No LED is lit up any longer. Press the start button (1) briefly to start the press device.

8 Start-up and operation of AXI102



8.1 Preparing AXI102 (Fig. 6)


	<p>CAUTION!</p> <p>Damage to the expander</p> <p>Using expander heads from other system suppliers may result in damage to the expander. The pitch of the expander cones differs from one system supplier to another. Therefore:</p> <ul style="list-style-type: none"> – Only use expander heads approved by the system supplier. – Only use expanders with intact, clean expander heads.
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	<p>Information!</p> <p>For product number: 45200; 45222; 45250: Grease the expander cone</p>
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- Screw the expander head onto the expander and tighten by hand.
- Insert the battery.

8.2 Expanding operation (Fig. 7)


 	<p>CAUTION!</p> <p>Danger of crushing!</p> <p>There is a risk of crushed fingers and hands during the expanding process. Therefore:</p> <ul style="list-style-type: none"> – Keep body parts and foreign objects away from the operating zone during the expansion operation. – Do not perform dry runs without expanding a pipe. – Do not operate the device without the expander head.
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	<p>Information!</p> <p>Before an expanding process, observe the system manufacturer's instructions.</p>
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1. Check that the nominal width of the pipe matches the nominal width of the expander head.
2. Check that the pipe and expander head are from the same system manufacturer.
3. Slide the pipe into the expander head as far as the stop.
4. Press the start button and hold it until the pipe has been expanded.

9 Start-up and operation of AAP102


9.1 Preparing AAP102

	<p>CAUTION!</p> <p>Damage to pusher tool and pusher adaptors</p> <p>Pressing operations using a system from a manufacturer for which the pusher tool and pusher adaptors have not been designed may result in damage to the pusher tool and pusher adaptors.</p> <p>Therefore:</p> <ul style="list-style-type: none"> - Make sure that the system is press-fitted using the pusher tool and pusher adaptors from the system manufacturer.
---	--

1. The guide rod must be clean and greased.
If necessary, clean and lubricate the guide rod.
2. Press the pin into the bolt and keep it pressed (1). (Fig. 8).
Pull the bolt out completely (2).
Release the pin.
3. Push the pusher adapter with inscription 1 onto the guide rod in the direction of the arrow (Fig. 9).
4. Align the pusher adaptor with the guide rod such as to ensure that the transverse holes are on the same axis (Fig. 10).


	<p>CAUTION!</p> <p>Damage to pusher tool and pusher adaptors if the bolt is not pushed in correctly (Fig.11)</p> <p>An incorrectly inserted bolt may result in damage to the pusher tool and pusher adaptors.</p> <p>Therefore:</p> <ul style="list-style-type: none"> - Make sure that bolts are fully inserted and locked in place.
--	--


5. Lock the pusher adapter in place with the bolt (Fig. 10)
To do so:
Press the pin into the bolt and keep it pressed (1).
Push the bolt in fully (2).
Release the pin in the bolt.

	<p>CAUTION!</p> <p>Damage to pusher tool and pusher adaptors (Fig.12)</p> <p>The pusher tool and pusher adaptors can be damaged by</p> <ul style="list-style-type: none"> · Fitting nominal widths that do not match · Pressing a system from a manufacturer for which the pusher tool and pusher adaptors have not been designed. <p>Therefore:</p> <ul style="list-style-type: none"> - Make sure that adaptors have the same nominal width. - Make sure that the matching nominal widths are lined up. - Make sure that the system is press-fitted using the pusher tool and pusher adaptors from the system manufacturer.
---	--


6. Push the pusher adapter with the inscription 2 onto the guide rod in the direction of the arrow and lock it using the bolt (Fig. 13)
7. Insert the battery.


9.2 Performing the pressing operation

	<p>CAUTION! Faulty pressing! Dirt, swarf, etc. in the contours of the pusher adaptors leads to a risk of faulty pressing. Therefore: – Ensure that there is no dirt, swarf, etc. in the contours of the pusher adapters.</p>
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	<p>Information! To align the tool with the pipe, compliance with the system manufacturer's instructions is essential.</p>
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1. Place the pusher tool on the joint to be pressed in accordance with information from the system manufacturer.

	<p>CAUTION! Danger of crushing by moving parts Fingers risk being crushed. Therefore: – Keep all body parts and foreign objects away from the operating zone.</p>
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	<p>Information! The pusher tool must be held in the aligned position during the entire pressing operation.</p>
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2. Press the start button and hold it until the pressing process is complete.

9.3 Meaning of the LED display

LED display	Status/cause	Measure
All LEDs off.	The device is switched off.	Briefly press the start button (1) (see section 7.4).
Green LED (2) lights up.	On standby.	
Green LED (2) flashes.	Insufficient battery charge.	Charge or replace battery.
Green LEDs (4)	Battery charge display	
Red LED (3) flashes.	Device not within the temperature range	The device only works within a temperature range of -10 to +50°C. If the red LED is flashing, the device must be moved into a warmer or colder area. The device can be warmed to operating temperature by means of dry runs. If the device is too warm it must be cooled down by means of a short break.
Red LED (3) lights up.	Device fault.	Press the start button (1). If this is unsuccessful, the press device is defective. Send the device to a specialist workshop. NOTE! The pressing operation may not have been completed; please check and repeat if required.
Red (3) and green (2) LED flash alternately.	Service interval reached.	Take the press device to be serviced.

10 Cleaning, maintenance and repair

	<p>CAUTION! Risk of injury during cleaning or repair work from inadvertently pressing the On switch.</p> <p>Therefore:</p> <ul style="list-style-type: none"> - Comply with the safety instructions and always remove the battery before performing cleaning, servicing or repair work.
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Service addresses

Novopress GmbH Pressen und Presswerkzeuge & Co. KG
 Welsersstr. 7
 41468 Neuss
 Germany

You can find the addresses of authorised specialist workshops by contacting Novopress or at www.novopress.de.

Service intervals

Service and repair work may only be carried out by Novopress or the authorised Novopress specialist workshops.

	<p>Information!</p> <p>The next service deadline is indicated on the press device. This service must be performed at least every 2 years or at the latest when the LED display indicates that a service is due (see Section 9.3 Meaning of the LED display).</p>
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Routine inspection (before use, at the start of the working day) and when soiled (Fig. 14+15)

Check for visible damage, material cracks and other signs of wear. If defects are found, do not use the device and have it repaired.


Expander

- Clean expander head.
- Clean and grease ram/expander cone.

Pusher tool

- Clean all adaptors completely with a solvent.
- Remove deposits from the contours of the adaptors.
- Clean the contours of the adaptors with a solvent.
- Lubricate the pusher tool bolts with machine oil.
- Clean and grease the guide rod.

11 Disposal

	<p>CAUTION! Groundwater hazard The device contains hydraulic fluid.</p> <p>Hydraulic fluids pose a hazard to groundwater. Uncontrolled drainage or improper disposal is punishable by law.</p> <p>Therefore:</p> <ul style="list-style-type: none"> – Dispose of the device in an environmentally responsible manner.
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The instructions in the operating instructions provided with the battery charger must be complied with when disposing of rechargeable batteries and the charger.

The product must not be disposed of as normal household waste.

Novopress recommends that disposal be carried out by authorised specialist companies.

Alternatively, waste devices can be returned directly to Novopress (or a specialist workshop) for proper disposal.

12 Warranty and guarantee

Novopress provides the full statutory warranty of 24 months for the AXI102 expander and AAP102 pusher tool. The warranty period always commences on the date of delivery, which must be proven by means of the sales documentation in case of doubt.

Within the warranty period, the warranty covers the repair of any damage or malfunction of these tools that is attributable to material or production faults.

The following are not covered by the warranty:

- Damage caused by improper use or inadequate servicing.
- Damage caused by the use of products not approved by Novopress for use with its press devices.
- Damage caused by pressing unsuitable pipes or fittings.

For wearing parts, the Novopress warranty lasts only for the intended service life.

Service work and parts provided in response to warranty claims do not have to be paid for. However, all shipping costs shall be borne by the user.

Claims can only be accepted if the device is delivered to Novopress or a Novopress workshop in an assembled state.

Repair or replacement of the device under warranty does not result in an extension of the warranty period. Repair or replacement can only be performed using as-new components, the function of which corresponds to that of the old components. All parts that are faulty and consequently replaced are the property of the manufacturer.

Extended warranty on expiry of the statutory warranty period

We voluntarily provide the following extended guarantee beyond the statutory warranty period.

1-year extended warranty for new expanders, pusher tools and pusher adaptors

Novopress provides an extended warranty of one year for all new expanders, pusher tools and pusher adaptors that have been serviced at least every 12 months by Novopress or by an authorised Novopress workshop. There is a charge for this service work. For details of costs, please contact Novopress or an authorised Novopress workshop

Repair warranty

Novopress provides the following repair and spare parts warranty beyond the warranty period for new products that undergo repair after this period:

- 6-month warranty for replaced spare parts.
- 12-month warranty for replaced assemblies.
- 12-month warranty for replaced press devices.

13 EU Declaration of Conformity

EU declaration of conformity and list of maintained directives and applicable standards see attached document EU declaration of conformity.