

FSA 86 R

STIHL



2 - 20	Gebrauchsanleitung
20 - 36	Instruction Manual
36 - 56	Notice d'emploi
56 - 74	Istruzioni d'uso
74 - 92	Handleiding



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26 Addresses..... 36

1 Introduction

Dear Customer,

Thank you for choosing STIHL. We develop and manufacture our quality products to meet our customers' requirements. The products are designed for reliability even under extreme conditions.

STIHL also stands for premium service quality. Our dealers guarantee competent advice and instruction as well as comprehensive service support.

STIHL expressly commit themselves to a sustainable and responsible handling of natural resources. This user manual is intended to help you use your STIHL product safely and in an environmentally friendly manner over a long service life.

We thank you for your confidence in us and hope you will enjoy working with your STIHL product.



Dr. Nikolas Stihl

**IMPORTANT! READ BEFORE USING AND
KEEP IN A SAFE PLACE FOR REFERENCE.**

2 Guide to Using this Manual

2.1 Applicable documents

The local safety regulations apply.

- ▶ In addition to this User Manual, you should also read, understand and retain the following documents:
 - User manual and packaging of the cutting attachment being used
 - User Manual of the carrying system being used
 - User Manual for STIHL AR battery
 - User manual for "AP belt bag with connecting cable"
 - Safety instructions and precautions for STIHL AP battery
 - User manual for STIHL AL 101, 301, 301-4, 501 chargers
 - Safety information for STIHL batteries and products with built-in battery:
www.stihl.com/safety-data-sheets

For further information on STIHL connected, compatible products and FAQs, please visit

Contents

1	Introduction.....	20
2	Guide to Using this Manual.....	20
3	Overview.....	21
4	Safety Precautions.....	22
5	Preparing Trimmer for Operation.....	27
6	Charging the Battery, LEDs.....	27
7	Activating and Deactivating Bluetooth® Radio Interface.....	28
8	Assembling the Trimmer.....	28
9	Adjusting Trimmer for User.....	29
10	Removing and Fitting the Battery.....	30
11	Switching the Trimmer On/Off.....	30
12	Testing the Trimmer and Battery.....	30
13	Operating the Trimmer.....	31
14	After Finishing Work.....	31
15	Transporting.....	32
16	Storing.....	32
17	Cleaning.....	32
18	Maintenance and Repairs.....	32
19	Troubleshooting.....	33
20	Specifications.....	34
21	Combinations of Cutting Attachments and Deflectors.....	35
22	Spare Parts and Accessories.....	35
23	Disposal.....	35
24	EC Declaration of Conformity.....	35
25	UKCA Declaration of Conformity.....	36

www.connect.stihl.com or available from a STIHL authorized dealer.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. These word marks and logos are used by STIHL under license.

Batteries with  are equipped with a Bluetooth® radio interface. Local operating restrictions (in aircraft or hospitals, for example) must be complied with.

2.2 Symbols used with warnings in the text



WARNING

- This symbol indicates dangers that can cause serious injuries or death.
 - The measures indicated can avoid serious injuries or death.

NOTICE

- This symbol indicates dangers that can cause damage to property.
 - The measures indicated can avoid damage to property.

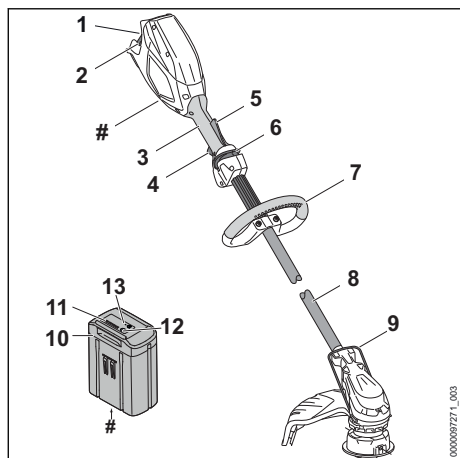
2.3 Symbols in Text



This symbol refers to a chapter in this instruction manual.

3 Overview

3.1 Brushcutter and battery



1 Battery compartment

The battery compartment holds the battery.

2 Locking lever

The locking lever holds the battery in the battery compartment.

3 Control handle

The control handle is used for operating, holding and controlling the brushcutter.

4 Trigger

The trigger switches the brushcutter on and off.

5 Ergo lever

The Ergo lever holds the release slide in position when the trigger is released.

6 Release slide

The release slide releases the trigger.

7 Loop handle

For holding and controlling the brushcutter.

8 Shaft

The shaft connects all components.

9 Bump guard

The bump guard protect objects from contact with the cutting tool.

10 Battery

The battery supplies power to the brushcutter.

11 LEDs

The LEDs indicate the state of charge of the battery and any faults.

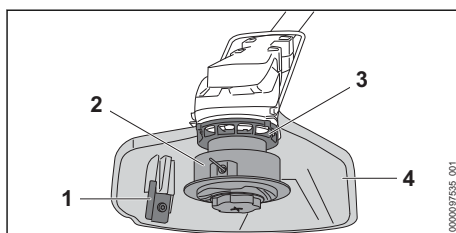
12 Pushbutton

The pushbutton activates the LEDs on the battery. The pushbutton activates and deactivates Bluetooth® radio interface (if available).

13 "BLUETOOTH®" LED (only for batteries with The LED indicates the activation and deactivation of the Bluetooth® interface.

Rating plate with the machine number

3.2 Deflector and Cutting Attachments



1 Line limiting blade

Line limiting blade trims nylon lines to correct length.

2 Mowing head

Mowing head accommodates the mowing lines.

3 Fanwheel

Cools the electric motor.

4 Deflector

Protects the user from flying debris and contact with the cutting attachment.

3.3 Symbols

Meanings of symbols that may be on the brushcutter, deflector and battery:



1 LED lights up steady red. The battery is too warm or too cold.



4 LEDs flash red. There is an error in the battery.



This symbol indicates in which direction the release slide has to be pushed.



This symbol shows the maximum speed of the cutting attachment.



Guaranteed sound power level in accordance with Directive 2000/14/EC in dB(A) for the purpose of comparing the sound emissions of products.



Recharge this battery with a STIHL charger. The admissible chargers are listed in these safety instructions.



The battery is equipped with a Bluetooth® radio interface and can be paired with the STIHL connected app.



The information next to the symbol indicates the energy content of the battery according to the cell manufacturer's specification. The energy content available in operation is lower.



Do not dispose of the product with domestic waste.

4 Safety Precautions**4.1 Warning symbols**

Meanings of warning signs on the brushcutter and battery:



Follow the safety notes and take the necessary precautions.



Read and understand the User Manual and keep it in a safe place for reference.



Wear safety glasses.



Observe the safety advice concerning flying objects and associated measures.



Remove the battery during work interruptions, transport, storage, maintenance or repair.



Maintain a safe distance.



Do not use metal cutting attachments.



Protect the battery against heat and fire.



Do not immerse the battery in liquids.

4.2 Intended Use

The STIHL FSA 86 R brushcutter is designed for mowing grass.

The brushcutter may be used in the rain.

The brushcutter is powered by a STIHL AP battery or a STIHL AR battery.

The battery with  in combination with the STIHL connected app enables customization and the transfer of information to the battery using Bluetooth® technology.

⚠ WARNING

- Batteries not explicitly approved for the brushcutter by STIHL may cause a fire or an explosion. Persons may be seriously or fatally injured, and property may be damaged.
 - Use the brushcutter with a STIHL AP battery or a STIHL AR battery.
- Using the brushcutter or the battery for purposes for which they were not designed can cause serious or fatal injuries and material damage.
 - Use the brushcutter as described in this User Manual.

- Use the battery as described in this User Manual, the STIHL AR battery User Manual, the STIHL connected app and at www.connect.stihl.com.

4.3 The Operator

⚠ WARNING

- Users without adequate training or instruction cannot recognize or assess the risks involved in using the trimmer and battery. The user or other persons may sustain serious or fatal injuries.



- Read, understand and save the instruction manual.

- If the trimmer or battery are passed on to another person: Always give them the instruction manual.
- Make sure the user meets the following requirements:
 - The user must be rested.
 - The user must be in good physical condition and mental health to operate and work with the trimmer and battery. If the user's physical, sensory or mental ability is restricted, he or she may work only under the supervision of or as instructed by a responsible person.
 - The user is able to recognize and assess the risks involved in using the trimmer and battery.
 - The user must be of legal age or is being trained in a trade under supervision in accordance with national rules and regulations.
 - The user has received instruction from a STIHL servicing dealer or other experienced user before working with the trimmer for the first time.
 - The user must not be under the influence of alcohol, medication or drugs.
- If you have any queries: Contact a STIHL servicing dealer for assistance.

4.4 Clothing and equipment

⚠ WARNING

- Objects can be thrown at high speed during operation. This may result in injury to the user.



- Wear close-fitting safety glasses. Suitable safety glasses are tested in accordance with EN 166 or national regulations and available commercially with the corresponding marking.

- If your face may be injured during work, STIHL recommends wearing a face protection over the safety glasses.
- Wear long pants made of robust material.
- Dust may be whipped up during operation. Whipped up dust can damage the respiratory passages and cause allergic reactions.
 - If dust is generated: Wear a dust respirator mask.
- Inappropriate clothing can snag on wood, brush or the brushcutter. Users not wearing suitable clothing may be seriously injured.
 - Wear close-fitting clothing.
 - Remove scarves and jewelry.
- The user may come into contact with the rotating cutting attachment during operation. This may result in serious injury to the user.
 - Wear robust footwear.
 - Wear long pants made of robust material.
- There is a risk of the user coming into contact with the cutting attachment or the line limiting blade during cleaning and maintenance work and when the cutting attachment is mounted or removed. This may result in injury to the user.
 - Wear work gloves made of robust material.
- Wearing unsuitable footwear may cause the user to slip. This may result in injury to the user.
 - Wear sturdy, closed-toed footwear with non-slip soles.

4.5 Work Area and Surroundings

4.5.1 Working Area and Surroundings

⚠ WARNING

- Bystanders, children and animals are not aware of the dangers of the brushcutter or flying debris. This may result in serious injury to bystanders, children and animals and damage to property.



- Do not allow bystanders, children or animals within 15 meters of the work area.
- Maintain a clearance of 15 meters from objects.
- Do not leave the brushcutter unattended.
- Make sure that children cannot play with the brushcutter.
- Electrical components of the brushcutter can produce sparks. Sparks may cause fires and explosions in highly flammable or explosive environments. Persons may be seriously or fatally injured and property may be damaged.

- ▶ Do not work in a highly flammable or explosive environment.

4.5.2 Battery

⚠ WARNING

- Bystanders, children and animals cannot recognize or assess the dangers of the battery. Bystanders, children and animals may be seriously injured.
 - ▶ Keep bystanders, children and animals away from the work area.
 - ▶ Do not leave the battery unattended.
 - ▶ Make sure that children cannot play with the battery.
- The battery is not protected against all ambient conditions. If the battery is exposed to certain ambient conditions, the battery may catch fire, explode or be irreparably damaged. This may result in serious injury to people and damage to property.



- ▶ Protect battery from heat and fire.
- ▶ Do not throw the battery into a fire.

- ▶ Do not charge, use and store the battery outside of the specified temperature limits, 20.3.



- ▶ Do not immerse the battery in liquids.

- ▶ Keep battery away from small metal parts.
- ▶ Do not expose the battery to high pressure.
- ▶ Do not expose the battery to microwaves.
- ▶ Protect the battery from chemicals and salts.

4.6 Safe Condition

4.6.1 Brushcutter

The brushcutter is in a safe condition if the following points are observed:

- The brushcutter is not damaged.
- The brushcutter is clean.
- The controls function properly and have not been modified.
- A combination of cutting attachment and deflector recommended in this user manual is mounted.
- The cutting attachment and deflector are properly mounted.
- Genuine STIHL accessories for this brushcutter are fitted.
- The accessories are correctly attached.

⚠ WARNING

- If not in safe condition, components may no longer operate correctly and safety devices may be disabled. This may result in serious or fatal injury to people.
 - ▶ Work only with an undamaged brushcutter.
 - ▶ If the brushcutter is dirty: Clean the brushcutter.
 - ▶ Never attempt to modify your brushcutter. Exception: Mounting one of the combinations of cutting attachment and deflector recommended in this user manual.
 - ▶ If the controls do not function properly: Do not use your brushcutter.
 - ▶ Never mount metal cutting attachments.
 - ▶ Fit genuine STIHL accessories for this brushcutter.
 - ▶ Mount the cutting attachment and deflector as described in this user manual.
 - ▶ Attach accessories as described in this User Manual or in the User Manual for the accessories.
 - ▶ Never insert objects in the openings of the brushcutter.
 - ▶ Replace worn or damaged labels.
 - ▶ If you have any doubts, be sure to consult a STIHL dealer.

4.6.2 Deflector

The deflector is in a safe condition if the following points are observed:

- The deflector is not damaged.
- The line limiter blade is correctly installed.

⚠ WARNING

- If the product does not comply with safety requirements, components will no longer function properly or safety devices may be rendered inoperative. This can result in serious injuries.
 - ▶ Work only with an undamaged deflector.
 - ▶ Work with a correctly installed line limiter blade.
 - ▶ If you have any queries: Contact your STIHL servicing dealer.

4.6.3 Mowing Head

The mowing head is in a safe condition if the following points are observed:

- The mowing head is not damaged.
- The mowing head is not jammed.
- The mowing head is correctly installed and firmly tightened.
- The mowing lines are properly installed.
- The wear limits are not exceeded.

WARNING

- If they are in an unsafe condition, parts of the mowing head or mowing lines may come off and be ejected at high speed. People may be seriously injured.
 - ▶ Work only with an undamaged mowing head.
 - ▶ Never use metal objects in place of the nylon mowing lines.
 - ▶ Observe and remain inside the wear limits.
 - ▶ If you are unsure: Consult a STIHL authorized dealer.

4.6.4 Battery

The battery is in a safe condition if the following points are observed:

- Battery is undamaged.
- The battery is clean and dry.
- Battery functions properly and has not been modified.

WARNING

- A battery that is not in a safe condition cannot operate safely. Persons may be seriously injured.
 - ▶ Never work with a damaged battery.
 - ▶ Never attempt to charge a damaged or defective battery.
 - ▶ If the battery is dirty: Clean the battery.
 - ▶ If the battery is wet or damp: Allow the battery to dry,  20.4.
 - ▶ Never attempt to modify the battery.
 - ▶ Never insert objects in the battery's openings.
 - ▶ Never bridge the battery's contacts with metallic objects (short circuit).
 - ▶ Do not open the battery.
 - ▶ Replace worn or damaged labels.
- Fluid may leak from a damaged battery. If that liquid comes into contact with the skin or eyes, the skin or eyes may be irritated.
 - ▶ Avoid contact with the liquid.
 - ▶ If skin contact occurs: Wash affected areas of skin with plenty of water and soap.
 - ▶ In the event of contact with eyes: Rinse eyes with plenty of water for at least 15 minutes and consult a doctor.
- A damaged or defective battery may smell unusual, emit smoke or burn. Persons may be seriously or fatally injured, and property may be damaged.
 - ▶ If the battery smells unusual or emits smoke: do not use the battery and keep it away from combustible substances.

- ▶ If the battery catches fire: Attempt to extinguish the battery with a fire extinguisher or water.

4.7 Working

WARNING

- In certain situations, the user may no longer be able to concentrate on their work. This may result in the user stumbling, falling and suffering serious injury.
 - ▶ Work calmly and methodically.
 - ▶ If light and visibility are poor: Do not use your brushcutter.
 - ▶ Operate the brushcutter alone.
 - ▶ Keep the cutting attachment close to the ground and horizontal to the surface.
 - ▶ Watch out for obstacles.
 - ▶ Work standing on the ground and keep your balance.
 - ▶ If you start feeling fatigue: Take a break.
- The rotating cutting attachment can cut the user. This may result in serious injury to the user.
 - ▶ Do not touch the rotating cutting attachment.
 - ▶ If the cutting attachment is blocked by an object: Switch off the brushcutter and remove the battery. Only then remove the object.
- If the behavior of the brushcutter changes during operation or feels unusual, it may no longer be in a safe condition. This may result in serious injury to people and damage to property.
 - ▶ Stop working, remove the battery and contact a STIHL authorized dealer.
- Vibrations may occur while using the brushcutter.
 - ▶ Wear gloves.
 - ▶ Take breaks.
 - ▶ If signs of a circulatory disorder occur: Consult a doctor.
- If the cutting attachment makes contact with a foreign object during operation, the object or parts of it may be ejected at high speed. Persons may be injured or property may be damaged.
 - ▶ Remove foreign objects from the working area.
- If the rotating cutting attachment makes contact with a hard object, sparks may occur and the cutting attachment may be damaged. Sparks can cause fires in a flammable environment. Persons may be seriously or fatally injured, and property may be damaged.

- ▶ Do not use in a flammable environment.
- ▶ Make sure the cutting attachment is in a safe condition.
- Note that the cutting attachment continues to rotate for a short period after you release the trigger. People may suffer serious injuries as a result.
 - ▶ Wait until the cutting attachment comes to a complete stop.

4.8 Transporting

4.8.1 Trimmer

▲ WARNING

- The trimmer may turn over or shift during transport. This may result in personal injuries and damage to property.



- ▶ Remove the battery.

- ▶ Secure the trimmer with lashing straps or a net to prevent it turning over and moving.

4.8.2 Battery

▲ WARNING

- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions, and damage to property may occur.
 - ▶ Never transport a damaged battery.
- The battery may turn over or shift during transport. This may result in injury to people and damage to property.
 - ▶ Pack the battery in packaging in such a way that it cannot move.
 - ▶ Secure the packaging so that it cannot move.

4.9 Storing

4.9.1 Trimmer

▲ WARNING

- Children are not aware of and cannot assess the dangers of a trimmer and can be seriously injured.



- ▶ Remove the battery.

- ▶ Store the trimmer out of the reach of children.

- Dampness can corrode the electrical contacts on the trimmer and metal components. This can damage the trimmer.



- ▶ Remove the battery.

- ▶ Store the trimmer in a clean and dry condition.

4.9.2 Battery

▲ WARNING

- Children are not aware of and cannot assess the dangers of the battery. Children may be seriously injured.
 - ▶ Store the battery out of the reach of children.
- The battery is not protected against all ambient conditions. If the battery is exposed to certain ambient conditions, the battery may be irreparably damaged.
 - ▶ Store the battery in a clean and dry condition.
 - ▶ Store the battery in an enclosed space.
 - ▶ Store the battery separately from the brushcutter.
 - ▶ If the battery is stored in the charger, disconnect the mains plug and store the battery at a state of charge between 40% and 60% (2 lit green LEDs).
 - ▶ Do not store the battery outside of the specified temperature limits, 0 to 20.3°C.

4.10 Cleaning, maintenance and repair

▲ WARNING

- The brushcutter may start up unintentionally if the battery is left in place during cleaning, maintenance or repair operations. This may result in serious injury to people and damage to property.



- ▶ Remove the battery.

- Aggressive cleaning agents, a water jet or pointed objects can damage the trimmer, deflector, cutting attachment and battery. If the brushcutter, deflector, cutting attachment or battery are not cleaned correctly, components may no longer function properly or safety devices may be rendered inoperative. People may be seriously injured.

- ▶ Clean the brushcutter, deflector, cutting attachment and battery as described in this User Manual.
- If the brushcutter, deflector, cutting attachment or battery are not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. There is a risk of serious or fatal injury.
- ▶ Do not attempt to service or repair the trimmer, deflector, cutting attachment or battery.
- ▶ If the brushcutter, deflector, cutting attachment or battery require servicing or repairs: Contact your STIHL authorized dealer for assistance.

5 Preparing Trimmer for Operation

5.1 Preparing the brushcutter for operation

The following steps must be performed before commencing work:

- ▶ Ensure that the following components are in a safe condition:
 - Brushcutter, 4.6.1.
 - Deflector, 4.6.2.
 - Mowing head, 4.6.3.
 - Battery, 4.6.4.
- ▶ Check the battery, 12.2.
- ▶ Fully charge the battery as described in the User Manual for the STIHL AL 101, 301, 301-4, 501 chargers.
- ▶ Clean the brushcutter, 17.1.
- ▶ Attach the spacer, 8.1.
- ▶ Attach the deflector, 8.2.
- ▶ Attach the loop handle, 8.3.
- ▶ Mount the mowing head, 8.4.
- ▶ Adjust the loop handle, 8.3.
- ▶ Check the controls, 12.1.
- ▶ If you cannot carry out these steps: Do not use your brushcutter and instead contact a STIHL authorized dealer.

5.2 Connecting a battery with Bluetooth® radio interface with the STIHL connected app

- ▶ Activate the Bluetooth® radio interface on the mobile device.
- ▶ Activating the Bluetooth® radio interface on the battery, 7.1.

- ▶ Download the STIHL connected app to the mobile device from the App Store and create an account.
- ▶ Open and sign in to the STIHL connected app.
- ▶ Add the battery in the STIHL connected app and follow the instructions on the screen.

For contacts and other information, please visit <https://support.stihl.com> or see the STIHL connected app.

The STIHL connected app is available internationally.

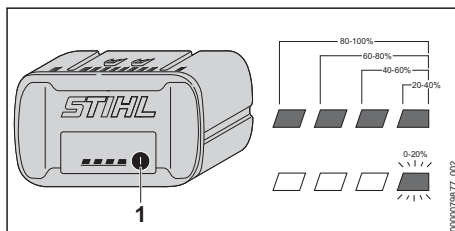
6 Charging the Battery, LEDs

6.1 Charging the battery

The charging time depends on various factors, e.g. the battery temperature or the ambient temperature. For optimal performance, note the recommended temperature ranges, 20.4. The actual charging time may vary from the charging time indicated. The charging time is indicated at www.stihl.com/charging-times.

- ▶ Recharge the battery as described in the User Manual for STIHL AL 101, 301, 301-4, 501 chargers.

6.2 Displaying the charge level



- ▶ Press the button (1).
The LEDs light up green for about 5 seconds and indicate the state of charge.
- ▶ If the LED on the right flashes green: Charge the battery.

6.3 LEDs on Battery

The LEDs can show the state of charge or malfunctions. The LEDs can glow or flash green or red.

The state of charge is indicated when the LEDs glow or flash green.

- ▶ If the LEDs glow or flash red: Troubleshooting, 19.
Malfunction in trimmer or battery.

7 Activating and Deactivating Bluetooth® Radio Interface

7.1 Activating the Bluetooth® Radio Interface

- ▶ If the battery has a Bluetooth® radio interface: Press and hold the pushbutton until the "BLUETOOTH®" LED next to the **C** symbol lights up blue for approximately 3 seconds. The Bluetooth® radio interface on the battery is activated.

7.2 Deactivating the Bluetooth® Radio Interface

- ▶ If the battery has a Bluetooth® radio interface: Press and hold the pushbutton until the "BLUETOOTH®" LED next to the **C** symbol lights up blue six times. The Bluetooth® radio interface on the battery is deactivated.

7.3 Reset battery to the factory setting via a Bluetooth® radio interface (AP 200.0 S, 300 S, 300.0 S, 500.0 S only)

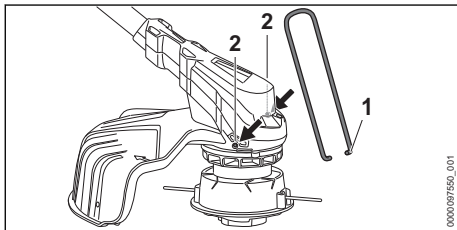
Resetting the battery to the factory setting means that all user-specific data will be deleted.

- ▶ Press the pushbutton four (4) times in quick succession and keep it pressed on the fourth time until the "BLUETOOTH®" LED next to the **C** symbol flashes blue.
- ▶ Then release the pushbutton immediately.
- ▶ Connect the battery to the STIHL connected app and check whether all user-specific data has been deleted.

8 Assembling the Trimmer

8.1 Mounting the bump guard

- ▶ Switch off the brushcutter and remove the battery.

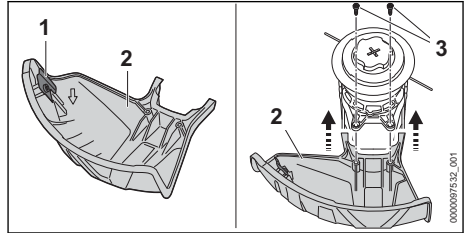


- ▶ Insert the ends of the bump guard (1) into the holes (2) in the housing.

The bump guard (1) need not be removed.

8.2 Mounting the guard

- ▶ Switch off the brushcutter and remove the battery.



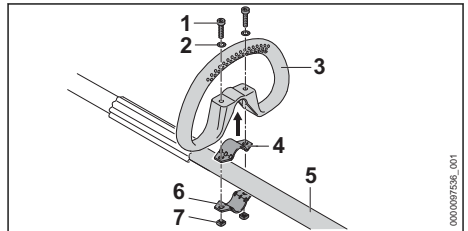
The line limiting blade (1) has already been installed in the guard (2) and must not be removed.

- ▶ Push the guard (2) into the guides on the housing until it hits the limit stop. The guard (2) is flush with the housing.
- ▶ Insert and tighten down the screws (3).

The guard (2) must not be removed.

8.3 Mounting the Loop Handle

- ▶ Switch off the brushcutter and remove the battery.



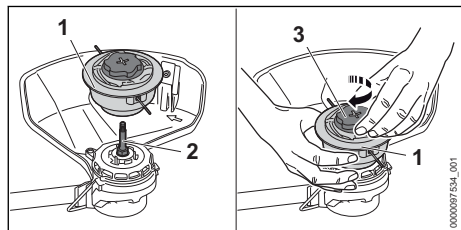
- ▶ Fit the clamp (4) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (4) on the shaft (5).
- ▶ Fit the washers (2) on the screws (1).
- ▶ Press the clamp (6) against the shaft (5).
- ▶ Insert the screws (1) through holes in the loop handle (3) and clamps (4 and 6).
- ▶ Fit and tighten down the nuts (7) firmly.

8.4 Mounting and Removing the Mowing Head

8.4.1 AutoCut C 6-2 mowing head

Mounting the Mowing Head

- Switch off the brushcutter and remove the battery.



- Position the mowing head (1) on the shaft (2).
- Hold the mowing head (1) with your hand.
- Manually rotate the cap (3) clockwise and tighten it.

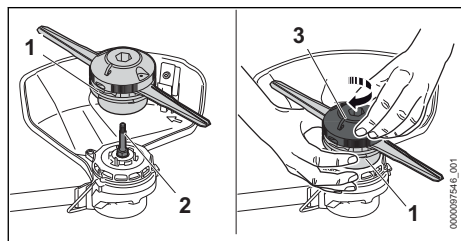
Removing the Mowing Head

- Switch off the brushcutter and remove the battery.
- Hold the mowing head with your hand.
- Manually rotate the cap counterclockwise until the mowing head can be removed.

8.4.2 PolyCut 6-2 mowing head

Mounting the Mowing Head

- Switch off the brushcutter and remove the battery.



- Position the mowing head (1) on the shaft (2).
- Hold the mowing head (1) with your hand.
- Manually rotate the upper part (3) clockwise and tighten it.

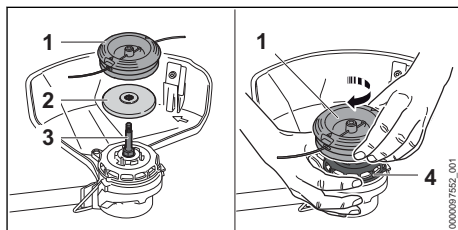
Removing the Mowing Head

- Switch off the brushcutter and remove the battery.
- Hold the mowing head with your hand.
- Manually rotate the upper part counterclockwise until the mowing head can be removed.

8.4.3 DuroCut 5-2 mowing head:

Mounting the Mowing Head

- Switch off the brushcutter and remove the battery.



- Place the thrust plate (2) on the shaft (3) so that its smaller diameter faces up.
- Position the mowing head (1) on the shaft (3).
- Hold the fanwheel (4) with your hand.
- Manually rotate the mowing head (1) clockwise and tighten it.

Removing the Mowing Head

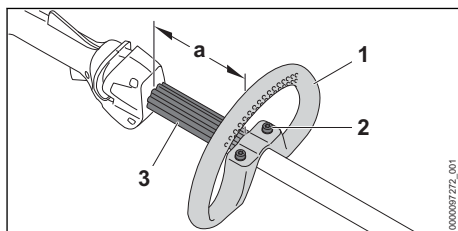
- Switch off the brushcutter and remove the battery.
- Hold the fanwheel with your hand.
- Unscrew the mowing head counterclockwise.
- Remove the thrust plate.

9 Adjusting Trimmer for User

9.1 Adjusting and Setting the Loop Handle

The loop handle can be set to different positions to suit the height and reach of the user.

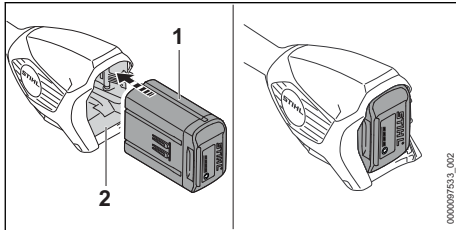
- Switch off the brushcutter and remove the battery.



- Undo the screws (2).
- Move the loop handle (1) to the required position and check that the following conditions are met:
 - The bump guard (3) fits between the loop handle (1) and the control handle.
 - a = no more than 30 cm.
- Tighten down the screws (2) so that the loop handle (1) cannot be rotated on the shaft.

10 Removing and Fitting the Battery

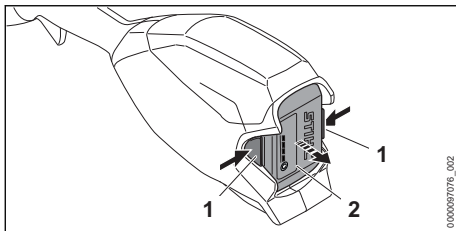
10.1 Inserting the Battery



- ▶ Insert the battery (1) into the battery compartment (2) as far as it will go. The battery (1) engages with a click and is now locked.

10.2 Removing the battery

- ▶ Keep one hand in front of the battery compartment so that the battery (2) cannot fall out.

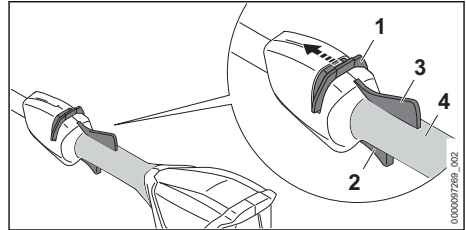


- ▶ Press both locking levers (1). The battery (2) is now unlocked and can be removed.

11 Switching the Trimmer On/Off

11.1 Switching on the brushcutter

- ▶ Hold the brushcutter firmly with one hand on the control handle so that your thumb wraps around the grip (4) of the control handle.
- ▶ Hold the brushcutter firmly with your other hand on the loop handle or the handle hose so that your thumb holds the loop handle or the handle hose.



- ▶ Use your thumb to push the release slide (1) in the direction of the loop handle and hold it there.
- ▶ Squeeze and hold the trigger (2) with your index finger. The brushcutter accelerates and the cutting attachment rotates. You can now release the release slide (1).

If the ergo lever (3) is pressed, the trigger (2) remains unlocked. This means that the trigger can be released and pressed again without pushing the release slide again in the direction of the loop handle.

If the trigger (2) and the ergo lever (3) are released, the trigger (2) is locked. To unlock the trigger (2), push and hold the release slide (1) again towards the loop handle.

11.2 Switching off the brushcutter

- ▶ Release the trigger and the Ergo lever.
- ▶ Wait for the cutting attachment to stop rotating.
- ▶ If the cutting attachment continues to rotate: Remove the battery and contact your STIHL dealer. The brushcutter is defective.

12 Testing the Trimmer and Battery

12.1 Checking the controls

Release slide, Ergo lever and trigger

- ▶ Remove the battery.
- ▶ Try squeezing the trigger switch without activating the release slide.
- ▶ If you can press the trigger: Stop using your brushcutter and contact a STIHL dealer. The release slide is faulty.
- ▶ Push the release slide in the direction of the loop handle with your thumb and hold it there.
- ▶ Press and hold Ergo lever.
- ▶ Press the trigger. The release slide can be released.
- ▶ Release the trigger and the Ergo lever.

- ▶ If release slide, trigger or Ergo lever is stiff or does not spring back to the initial position: Stop using the brushcutter and contact a STIHL dealer.
The release slide, trigger or the Ergo lever is defective.

Switching the Brushcutter on

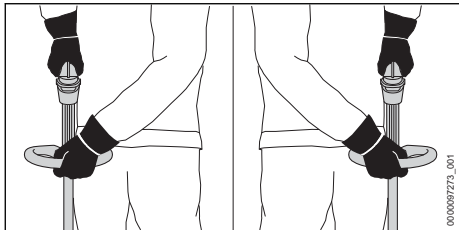
- ▶ Insert battery.
- ▶ Push and hold the release slide towards the loop handle.
- ▶ Press and hold the trigger.
The cutting attachment rotates.
- ▶ If 3 LEDs flash red: Remove the battery and consult a STIHL dealer.
The brushcutter has a malfunction.
- ▶ Release the trigger.
The cutting attachment stops rotating after a brief delay.
- ▶ If the cutting attachment continues to rotate: Remove the battery and contact your STIHL dealer.
The brushcutter is defective.

12.2 Testing the Battery

- ▶ Press button on battery.
The LEDs glow or flash.
- ▶ If the LEDs do not glow or flash: Do not use the battery and contact your STIHL servicing dealer.
There is a malfunction in the battery.

13 Operating the Trimmer

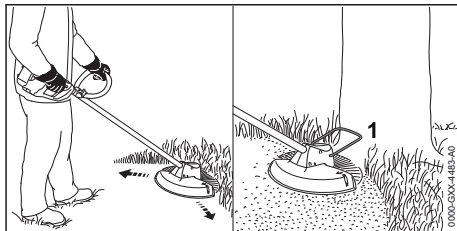
13.1 Holding and guiding the brushcutter



- ▶ Hold the brushcutter firmly with one hand on the control handle so that your thumb wraps around the grip of the control handle.
- ▶ Hold the brushcutter with the other hand on the loop handle so that your thumb wraps around the loop handle.

13.2 Mowing

The cutting height is determined by the distance of the cutting attachment from the ground.

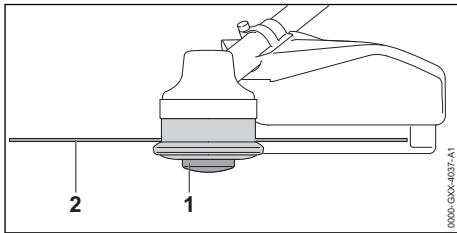


- ▶ Swing the brushcutter steadily back and forth in an arc.
- ▶ Walk forward slowly and steadily.
- ▶ If you work with a bump guard (1): Extend the bump guard (1) fully.

For optimum performance, observe the recommended temperature ranges, 20.4.

13.3 Line Feed on AutoCut Mowing Heads

- ▶ Briefly tap the rotating mowing head on the ground.
About 30 mm of fresh nylon line is advanced.
The line limiting blade in the deflector automatically cuts the mowing lines to the correct length.



Automatic feed will not take place if the mowing lines are shorter than 25 mm.

- ▶ Switch off the brushcutter and remove the battery.
- ▶ Depress the spool (1) on the mowing head and hold it depressed.
- ▶ Pull out the mowing lines (2) by hand.
- ▶ If the mowing lines (2) cannot be pulled out to the required length: Replace the spool (1) or the mowing lines (2).
The spool is empty.

14 After Finishing Work

14.1 After Finishing Work

- ▶ Switch off the brushcutter and remove the battery.
- ▶ If the brushcutter is wet: Allow the brushcutter to dry.

- ▶ If the battery is moist or wet: Allow the battery to dry,  20.4.
- ▶ Clean the brushcutter.
- ▶ Clean the deflector.
- ▶ Clean the cutting attachment.
- ▶ Clean the battery.

15 Transporting

15.1 Transporting the brushcutter

- ▶ Switch off the brushcutter and remove the battery.

Carrying the Brushcutter

- ▶ Carry the brushcutter in one hand properly balanced by the shaft, with the cutting attachment behind you.

Transporting the brushcutter in the car

- ▶ Secure the brushcutter to prevent turnover and movement.

15.2 Transporting the Battery

- ▶ Switch off the brushcutter and remove the battery.
- ▶ Check that the battery is in a safe condition.
- ▶ Pack the battery in packaging in such a way that it cannot move inside the packaging.
- ▶ Secure the packaging so that it cannot move.

The battery is subject to the Carriage of Dangerous Goods regulations. The battery is classified as UN 3480 (lithium ion batteries) and has been tested pursuant to UN Manual Tests and Criteria Part III, Subsection 38.3.

The transport regulations can be found at www.stihl.com/safety-data-sheets.

16 Storing

16.1 Storing the brushcutter

- ▶ Switch off the brushcutter and remove the battery.
- ▶ Remove the spool.
- ▶ Ensure that the following conditions are met when storing the brushcutter:
 - The brushcutter cannot tip over or shift.
 - The brushcutter is out of the reach of children.
 - The brushcutter is clean and dry.

16.2 Storing the Battery

STIHL recommends keeping the battery in a charging state between 40% and 60 % (2 green LEDs lit).

- ▶ The battery should be stored in such a way that the following conditions are fulfilled:

- The battery is out of the reach of children.
- The battery is clean and dry.
- The battery is in an enclosed space.
- The battery is separated from the brushcutter.
- If the battery is stored in the charger, disconnect the mains plug and store the battery at a state of charge between 40% and 60% (2 lit green LEDs).
- Do not store the battery outside of the specified temperature limits,  20.3.

NOTICE

- If the battery is not stored as described in this User Manual, the battery may become deeply discharged and irreparably damaged.
 - ▶ Charge a discharged battery before storing it. STIHL recommends keeping the battery state of charge between 40% and 60% (2 lit green LEDs).
 - ▶ Store the battery separately from the brushcutter.

17 Cleaning

17.1 Cleaning the Brushcutter

- ▶ Switch off the brushcutter and remove the battery.
- ▶ Clean the brushcutter with a damp cloth.
- ▶ Clean vents with a paintbrush.
- ▶ Remove foreign objects from the battery compartment and clean the battery compartment with a damp cloth.
- ▶ Clean the electrical contacts in the battery compartment with a paintbrush or soft brush.
- ▶ Clean the area underneath the fanwheel with a soft brush.

17.2 Cleaning the Deflector and Cutting Attachment

- ▶ Switch off the trimmer and remove the battery.
- ▶ Clean the deflector and cutting attachment with a damp cloth or a soft brush.

17.3 Cleaning the Battery

- ▶ Clean the battery with a damp cloth.

18 Maintenance and Repairs

18.1 Servicing and Repairing the Trimmer

The trimmer cannot be serviced or repaired by the user.

- If your trimmer has a malfunction or is damaged or requires servicing: Contact your STIHL servicing dealer.

- If the battery has a malfunction or is damaged: Replace the battery.

18.2 Servicing and Repairing the Battery

The battery requires no servicing and cannot be repaired.

19 Troubleshooting

19.1 Troubleshooting the brushcutter or battery

Error	LEDs on the battery	Cause	Remedy
The brushcutter does not start when switched on.	1 LED flashes green.	The state of charge of the battery is too low.	► Recharge the battery fully as described in the user manual for the STIHL AL 101, 301, 301-4, 501 chargers.
	1 LED lights up steady red.	The battery is too warm or too cold.	► Remove the battery. ► Allow the battery to cool down or warm up.
	3 LEDs flash red.	The brushcutter has a malfunction.	► Remove the battery. ► Clean the electrical contacts in the battery compartment. ► Insert the battery. ► Switch on the brushcutter. ► If 3 LEDs continue to flash red: Do not use the brushcutter and contact a STIHL authorized dealer for assistance.
	3 LEDs light up red.	The brushcutter is too hot.	► Remove the battery. ► Allow the brushcutter to cool down.
	4 LEDs flash red.	There is an error in the battery.	► Remove the battery and reinsert it. ► Switch on the brushcutter. ► If 4 LEDs continue to flash red: Do not use the battery and instead contact a STIHL authorized dealer for assistance.
		No electrical contact between brushcutter and battery.	► Remove the battery. ► Clean the electrical contacts in the battery compartment. ► Insert the battery.
		The brushcutter or battery is damp.	► Allow the brushcutter or battery to dry,  20.4.
The brushcutter cuts out during operation.	3 LEDs light up red.	The brushcutter is too hot.	► Remove the battery. ► Allow the brushcutter to cool down.
		There is an electrical, electromagnetic malfunction.	► Remove battery and reinsert it. ► Switch on the brushcutter.
The runtime of the brushcutter is too short.		The battery is not fully charged.	► Recharge the battery fully as described in the User Manual for the STIHL AL 101, 301, 301-4, 501 chargers.
		The battery service life has been exceeded.	► Replace battery.
The mowing head cannot be removed by hand.		The mowing head is overtightened.	► Block the fanwheel with the stop pin. ► Unscrew the mowing head by hand. ► Remove the stop pin.

Error	LEDs on the battery	Cause	Remedy
The STIHL connected app is unable to find the battery with  .		The Bluetooth® radio interface on the battery or mobile device is deactivated.	► Activate the Bluetooth® radio interface on the battery or mobile device.
		Excessive distance between the battery and the mobile device.	► Reduce the distance,  20.2. ► If the STIHL connected app is still unable to find the battery: Contact a STIHL authorized dealer.

19.2 Product Support and Assistance on Use

Product support and assistance on use are available from STIHL servicing dealers.

For contacts and other information, please visit <https://support.stihl.com> or www.stihl.com.

20 Specifications

20.1 STIHL FSA 86 R Brushcutters

- Approved batteries:
 - STIHL AP
 - STIHL AR
- Weight with heaviest mowing head and associated heaviest deflector, without battery: 3.35 kg
- Length without cutting tool: 1725 mm
- Maximum speed of cutting attachment: 8,000 rpm
- Degree of protection: IPX4 (protection against splash water from any direction)

For runtime, see www.stihl.com/battery-life.

20.2 STIHL AP Battery

- Battery technology: Lithium-ion
- Voltage: 36 V
- Capacity in Ah: see rating label
- Energy content in Wh: see rating label
- Weight in kg: See rating label
- Bluetooth® radio interface (only for batteries with ):
 - Data connection: Bluetooth® 5.1. The mobile device must be compatible with Bluetooth® Low Energy 5.0 and support Generic Access Profile (GAP).
 - Frequency band: ISM band 2.4 GHz
 - Maximum RF power transmitted: 1 mW
 - Signal range: approx. 10 m. The signal strength depends on the ambient conditions and the mobile device. The signal range can vary greatly depending on local conditions and the receiver used. The range may be perceptibly reduced inside enclosed rooms

and through metal barriers (such as walls, shelves or cases).

- Mobile device operating system requirements: Android or iOS (current version or higher)

The power output of the battery may vary depending on the battery product used.

20.3 Temperature limits



WARNING

- The battery is not protected against all ambient conditions. If the battery is exposed to certain environmental conditions, it may catch fire or explode. This may result in serious injury to people and damage to property.
 - Do not charge the battery below -20°C or above 50°C.
 - Do not use the brushcutter or battery below -20°C or above 50°C.
 - Do not store the brushcutter or battery below -20°C or above +70°C.

20.4 Recommended temperature ranges

For optimum performance of the brushcutter and battery, note the following temperature ranges:

- Charging: 5°C to 40°C
- Use: - 10 °C to + 40 °C
- Storage: - 20 °C to + 50 °C

If the battery is charged, used or stored outside the recommended temperature ranges, performance may be restricted.

If the battery is wet or moist, allow the battery to dry for at least 48 h between 15°C and 50°C and with less than 70% humidity. Higher humidity may extend the drying time.

20.5 Sound and vibration values

The K-value for the sound pressure level is 2 dB(A). The K value for the sound power level is 2 dB(A). The K value for the vibration level is 2 m/s².

STIHL recommends wearing hearing protection.

Using with a mowing head except PolyCut 6-2

- Sound pressure level L_{pA} measured as specified in EN 50636-2-91: 77 dB(A)
- Sound power level L_{WA} measured as specified in EN 50636-2-91: 91 dB(A)
- Vibration level a_{hv} measured as specified in EN 50636-2-91
 - Control handle: 2.0 m/s².
 - Loop handle: 3.7 m/s².

Using with a mowing head PolyCut 6-2

- Sound pressure level L_{pA} measured as specified in EN 50636-2-91: 80 dB(A)
- Sound power level L_{WA} measured as specified in EN 50636-2-91: 92 dB(A)
- Vibration level a_{hv} measured as specified in EN 50636-2-91
 - Control handle: 2.0 m/s².
 - Loop handle: 3.7 m/s².

The sound and vibration values indicated were measured according to a standardized test method and can be used as a basis for comparing electric power tools. The actual sound and vibration levels may vary from the values indicated, depending on the type of application and the accessories used. The sound and vibration levels indicated can be used for an initial estimate of the sound and vibration load. The actual sound and vibration stress has to be estimated. The times can be taken into account in the estimate when the electric power tool is switched off and also when it is switched on but running without any load.

For information on compliance with the Physical Agents (Vibration) Directive 2002/44/EC, see www.stihl.com/vib.

20.6 REACH

REACH is an EC regulation and stands for the Registration, Evaluation, Authorisation and Restriction of Chemical substances.

For information on compliance with the REACH regulation see www.stihl.com/reach.

21 Combinations of Cutting Attachments and Deflectors

21.1 STIHL FSA 86 R Brushcutters

The following mowing heads may be mounted together with the guard for mowing heads:

- STIHL AutoCut C 6-2 mowing head:
 - with round, low-noise mowing line with a diameter of 2.0 mm or 2.4 mm
- PolyCut 6-2 mowing head
 - with blades (Ø 300 mm)
- DuroCut 5-2 mowing head:
 - with round, low-noise mowing lines with a diameter of 2.0 mm

22 Spare Parts and Accessories

22.1 Spare parts and accessories

STIHL  These symbols indicate original STIHL spare parts and original STIHL accessories.

STIHL recommends the use of original STIHL spare parts and accessories.

Despite ongoing market observation, STIHL is unable to judge the reliability, safety and suitability of other manufacturers' spare parts and accessories; accordingly, STIHL cannot warrant for the use of those parts.

Original STIHL spare parts and original STIHL accessories are available from STIHL dealers.

23 Disposal

23.1 Disposing of the Trimmer and Battery

Contact the local authorities or your STIHL dealer for information on disposal.

Improper disposal can be harmful to health and pollute the environment.

- ▶ Take STIHL products including packaging to a suitable collection point for recycling in accordance with local regulations.
- ▶ Do not dispose with domestic waste.

24 EC Declaration of Conformity

24.1 STIHL FSA 86 R Brushcutters

ANDREAS STIHL AG & Co. KG
Badstraße 115

D-71336 Waiblingen

Germany

declare under our sole responsibility that

- category: Cordless brushcutter
- Manufacturer's brand: STIHL
- model: FSA 86 R
- Serial number: FA05

conforms to the relevant provisions of Directives 2011/65/EU, 2006/42/EC, 2014/30/EU and 2000/14/EC and has been developed and manufactured in compliance with the following standards in the versions valid on the date of production: EN 55014-1, EN 55014-2, EN 60335-1 and EN ISO 12100 taking EN 50636-2-91 into account.

The measured and guaranteed sound power levels were determined according to Directive 2000/14/EC, Annex VI.

Participating notified body: VDE Prüf- u. Zertifizierungsinstitut, Merianstraße 28, 63069 Offenbach, Germany

- Measured sound power level: 91 dB(A)
- Guaranteed sound power level: 93 dB(A)

The technical documents are stored at ANDREAS STIHL AG & Co. KG Produktzulassung.

The year of manufacture, country of manufacture and serial number are specified on the rating plate of the brushcutter.

Waiblingen, 2023-01-05

ANDREAS STIHL AG & Co. KG

pp 

Robert Olma, Vice President, Regulatory Affairs & Global Governmental Relations

25 UKCA Declaration of Conformity

25.1 STIHL FSA 86 R Brushcutters

**UK
CA**

ANDREAS STIHL AG & Co. KG
Badstraße 115
D-71336 Waiblingen
Germany

declare under our sole responsibility that

- category: Cordless brushcutter
- Manufacturer's brand: STIHL
- model: FSA 86 R
- Serial number: FA05

complies with the relevant provisions of the UK regulations The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, Supply of Machinery (Safety) Regulations 2008, Electromagnetic Compatibility Regulations 2016 and Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001 and has been developed and manufactured in accordance with the versions of the following standards valid on the date of manufacture: EN 55014-1, EN 55014-2, EN 60335-1 and EN ISO 12100 taking into account the standard EN 50636-2-91.

The measured and guaranteed sound power levels have been determined in accordance with UK regulations Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001, Schedule 9.

Participating notified body: INTERTEK Testing & Certification Ltd, Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ, United Kingdom

- Measured sound power level: 91 dB(A)
- Guaranteed sound power level: 93 dB(A)

The technical documents are stored at ANDREAS STIHL AG & Co. KG.

The year of manufacture, country of manufacture and serial number are specified on the rating plate of the brushcutter.

Waiblingen, 2023-01-05

ANDREAS STIHL AG & Co. KG

pp 

Robert Olma, Vice President, Regulatory Affairs & Global Governmental Relations

26 Addresses

www.stihl.com

Table des matières

1	Préface.....	37
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