

STIHL

STIHL FSA 90

Gebrauchsanleitung
Instruction Manual
Notice d'emploi
Istruzioni d'uso

Handleiding





Cullen Community Allotment Association
Scottish Registered Charity No. SC043932

Stihl Battery Powered Strimmer

This Manual should be read in conjunction with the solar power supply user guide and the Stihl battery charger manual which can be found at <http://edelsten.org.uk/CCAA/documents.htm>

When using the strimmer, you should observe the CCAA safety advice on the next page

Always ensure the batteries are left fully charged when you have finished. Do not walk away leaving the next person to charge the batteries before they can start strimming.

Safety Advice

Even though it is battery operated, use ear defenders, and, as stones and other debris can be kicked up, use a safety shield



Wear a coverall or other clothing you don't mind getting covered in grass.

Adjust the harness to suit your own build

Wear gloves

Wear boots or other suitable footwear

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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 specialist dealers guarantee competent advice and instruction as well as comprehensive service support.

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



Dr. Nikolas Stihl

IMPORTANT: READ BEFORE USE AND KEEP IN A SAFE PLACE.

2 Guide to Using this Manual

2.1 Applicable Documentation

Local safety regulations apply.

- ▶ Read, understand and save the following documents in addition to this instruction manual:
 - Instruction manual and packaging of the cutting attachment you are using
 - Instruction manual of the carrying system you are using
 - User instructions for STIHL AR battery
 - User instructions for AP belt bag with connecting cable
 - Safety notes and precautions for STIHL AP battery
 - Instruction manual for STIHL AL 101, 300, 500 chargers

- Safety information for STIHL batteries and products with built-in batteries: www.stihl.com/safety-data-sheets

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.

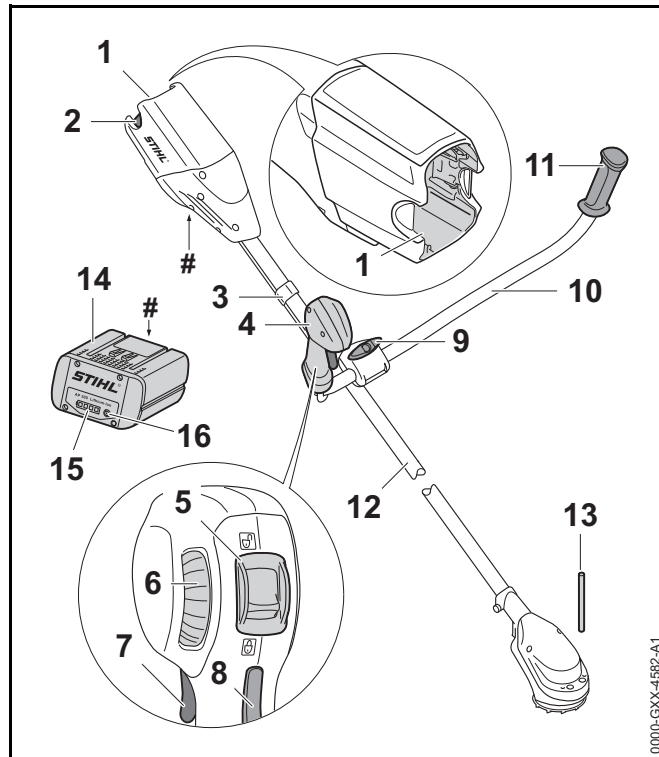
2.3 Symbols in Text



This symbol refers to a chapter in this instruction manual.

3 Overview

3.1 STIHL FSA 90 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 Throttle cable retainer

The throttle cable retainer fastens the throttle cable on the shaft.

4 Control handle

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

5 Retaining latch

The retaining latch unlocks the trigger switch together with the trigger lockout.

6 Set wheel

The set wheel is used to select the power level.

7 Trigger

The trigger switches the brushcutter on and off.

8 Trigger lockout

The trigger lockout unlocks the trigger.

9 Wing screw

The wing screw secures the handlebar to the handle support.

10 Handlebar

The handlebar connects control handle and handle with the shaft.

11 Handle

The handle is for holding and controlling the brushcutter.

12 Shaft

The shaft connects all components.

13 Stop pin

The stop pin blocks the shaft while a cutting attachment is being mounted.

14 Battery

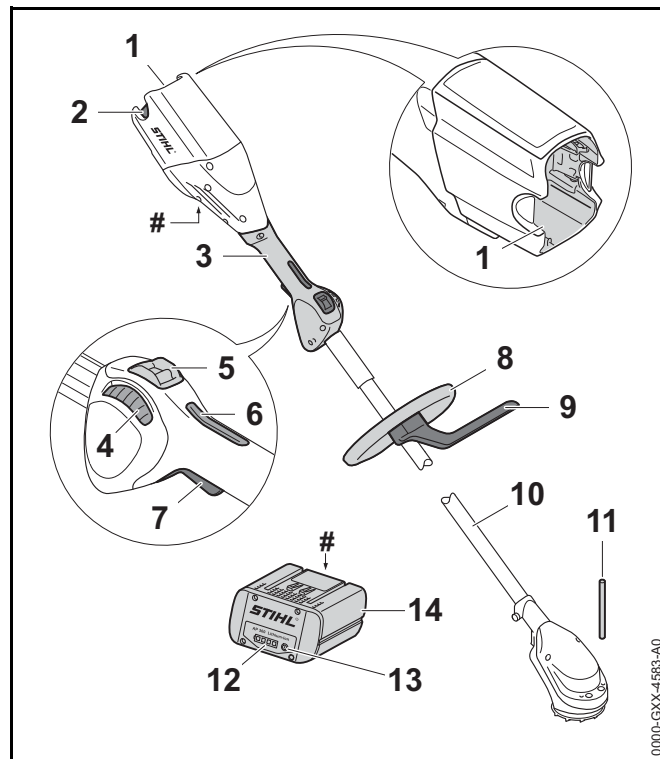
The battery supplies power to the brushcutter.

15 LEDs

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

16 Button

The button activates the LEDs on the battery.

Rating plate with machine number**3.2 STIHL FSA 90 R Trimmer and Battery****1 Battery Compartment**

Accommodates the battery.

2 Locking Lever

Secures the battery in the battery compartment.

3 Control Handle

For operating, holding and controlling the trimmer.

4 Set Wheel

Used to select the power level.

5 Retaining Latch

Operated together with the trigger lockout to unlock the trigger.

6 Trigger Lockout

Locks trigger in position.

7 Trigger

The trigger switches the motor on and off.

8 Loop Handle

For holding and controlling the trimmer.

9 Barrier Bar

Maintains distance between operator's leg and a metal cutting attachment.

10 Drive Tube

Connects all components.

11 Stop Pin

Blocks shaft while cutting attachment is being mounted.

12 LEDs

Indicate battery's state of charge and malfunctions.


13 Button

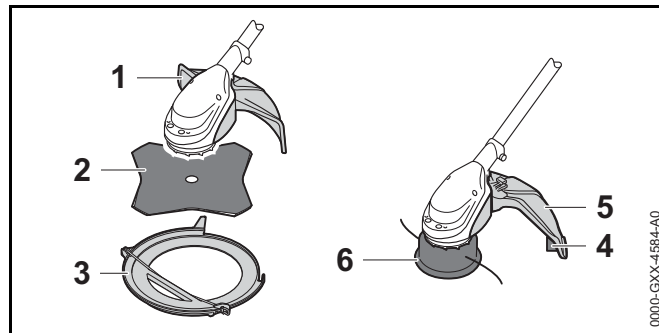
Activates the LEDs on the battery.

14 Battery

Supplies power to the trimmer.

Rating label with serial number**3.3 Deflectors and Cutting Attachments**

The illustrations show examples of deflectors and cutting attachments. Approved combinations are listed in this instruction manual,  21.

**1 Deflector for Metal Cutting Attachments**

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

2 Grass Cutting Blade

Cuts grass and weeds.

3 Transport Guard

Helps protect user from contact with metal cutting attachments.

4 Deflector for Mowing Heads

Protects user from flying debris and contact with the mowing head.


5 Line Limiting Blade

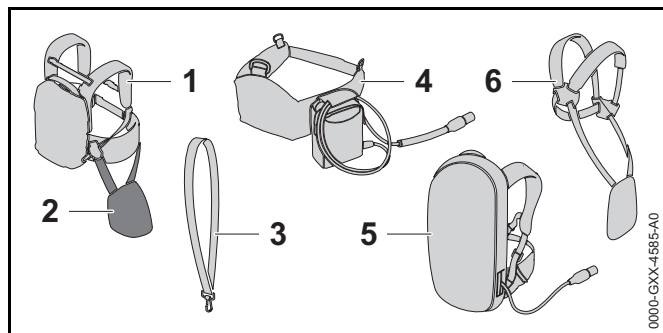
Trims surplus mowing line to correct length.

6 Mowing Head

The mowing head contains the mowing line.

3.4 Carrying Systems

The illustrations show typical examples of carrying systems. Approved combinations are listed in this instruction manual,  21.



1 STIHL AR Battery

Supplies power to the trimmer.

2 Hip Padding

Serves to secure trimmer to STIHL AR battery or the carrying system with built-in "AP belt bag with connecting cable".

3 Shoulder Strap

Serves to carry the trimmer.

4 "AP Belt Bag with Connecting Cable"

Can supply power to the trimmer.

5 Carrying System with Built-In "AP Belt Bag with Connecting Cable"

Can supply power to the trimmer.

6 Full Harness

Serves to carry the trimmer.

3.5 Symbols

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



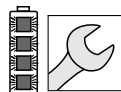
Retaining latch unlocks the trigger in this position.



Retaining latch locks the trigger in this position.



1 LED glows red. Battery too hot or too cold.



4 LEDs flash red. There is a malfunction in the battery.



This symbol shows the direction of rotation of the cutting attachment.

max Ø XXX This symbol shows the maximum diameter of the cutting attachment in millimeters.



This symbol shows the rated speed of the cutting attachment.



LWA Guaranteed sound power level according to directive 2000/14/EC in dB(A) in order to make sound emissions of products comparable.



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



Do not dispose of the product with your household waste.

4 Safety Precautions

4.1 Warning Symbols

Meanings of warning signs on the trimmer and battery:



Observe safety notices and take the necessary precautions.



Read, understand and save the instruction manual.



Wear safety glasses.
If there is a danger of falling objects during operation: Wear a safety hard hat.



Wear safety boots.



Wear work gloves.



Observe safety notices on kickback and take the necessary precautions.



Observe safety notices on flying debris and take the necessary precautions.



Maintain safe distance.



Always remove the battery during work breaks, transport, storage, maintenance or repairs.



Protect battery from heat and fire.



Do not immerse battery in fluids.



Observe battery's permissible temperature range.

4.2 Intended Use

The STIHL FSA 90 trimmer is designed for the following applications:

- with a mowing head: Mowing grass
- with a grass cutting blade: Mowing grass and weeds

The trimmer may be used in the rain.

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

⚠ WARNING

- Batteries not explicitly approved for the trimmer by STIHL may cause a fire or explosion. This can result in serious or fatal injuries and damage to property.
 - Use the trimmer with a STIHL AP battery or a STIHL AR battery.
- Using the trimmer or the battery for purposes for which they were not designed may result in serious or fatal injuries and damage to property.
 - Use the trimmer as described in this instruction manual.
 - Use the battery as described in this instruction manual or the instruction manual for the STIHL AR battery.

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

- Long hair can be drawn into the brushcutter during operation. This may result in serious injury to the user.
 - ▶ Tie up and confine long hair above your shoulders.
- Objects can be ejected 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.

- ▶ Wear face protection.

- ▶ Wear long trousers made from resistant material.

- Falling objects can cause head injuries.



- ▶ If objects are likely to fall while working: wear a hard hat

- Dust can 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 are at risk of serious injury.
 - ▶ 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.



- ▶ If you are using a metal cutting attachment: Wear steel-toed safety boots.

- ▶ Wear long trousers made from resistant material.

- The user may come into contact with the cutting attachment or line limiting blade during cleaning and maintenance work. This may result in injury to the user.



- ▶ Wear work gloves made from resistant material.

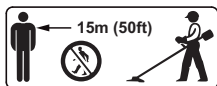
- Wearing unsuitable footwear may cause the user to slip. This may result in injury to the user.
- ▶ Wear sturdy, closed-toed footwear with high-grip soles.

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

- Bystanding people, children and animals cannot recognise or evaluate the dangers posed by the battery. This may result in serious injury to bystanding people, children and animals.
- ▶ Keep bystanding people, children and animals out of the way.
- ▶ 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 exposed to certain ambient conditions, the battery may catch fire or explode. This may result in serious injury to people and damage to property.



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



- ▶ Use and store the battery at temperatures between - 10 °C and + 50 °C.



- ▶ Do not immerse the battery in liquids.

- ▶ Keep the battery away from metallic objects.
- ▶ 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 Trimmer

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

- The trimmer is not damaged.
- The trimmer is clean.
- The controls function properly and have not been modified.
- A combination of cutting attachment and deflector recommended in this instruction manual is mounted.
- Cutting attachment and deflector are properly mounted.
- Only original STIHL accessories designed for this trimmer are fitted.
- Accessories are properly mounted.

⚠ WARNING

- If components do not comply with safety requirements, they will no longer function properly and safety devices may be rendered inoperative. This can result in serious or fatal injuries.
 - ▶ Work only with an undamaged trimmer.
 - ▶ If the trimmer is dirty: Clean the trimmer.
 - ▶ Never attempt to modify your trimmer. Exception: Mounting one of the combinations of cutting attachment and deflector recommended in this instruction manual.
 - ▶ If the controls do not function properly: Do not use your trimmer.
 - ▶ Only fit original STIHL accessories designed for this trimmer.
 - ▶ Mount the cutting attachment and deflector as described in this instruction manual.
 - ▶ Mount accessories as described in this instruction manual or the instructions supplied with the accessory.

- ▶ Never insert objects in the trimmer's openings.
- ▶ Replace worn or damaged labels.
- ▶ If you have any queries: Contact a STIHL servicing dealer for assistance.

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 lines are properly installed.
- If a Polycut mowing head with polymer blades is used:
 - The polymer blades are free of damage and tears.
 - The polymer blades are properly mounted.

⚠ WARNING

- If they are in an unsafe condition, parts of the mowing head, mowing lines or polymer blades may come off and be ejected at high speed. They may cause serious injury to persons.
 - ▶ Work only with an undamaged mowing head.
 - ▶ If a PolyCut mowing head with polymer blades is used: Never work with damaged polymer blades.
 - ▶ Never use metal objects in place of the nylon mowing lines or polymer blades.
 - ▶ If you have any doubts, be sure to consult a STIHL dealer.

4.6.4 Metal Cutting Attachment

The metal cutting attachment is in a safe condition if the following points are observed:

- Metal cutting attachment and mounting hardware are undamaged.
- Metal cutting attachment is not warped.
- Metal cutting attachment is properly mounted.
- Metal cutting attachment is correctly sharpened.
- Cutting edges of the metal cutting attachment have no burrs.

⚠ WARNING

- If it is not in an safe condition, parts of the metal cutting attachment may come off and be thrown at high speed. This can result in serious injuries.
 - ▶ Never work with a damaged metal cutting attachment or damaged mounting hardware.
 - ▶ Sharpen the metal cutting attachment correctly.
 - ▶ Deburr the cutting edges with a file.
 - ▶ Have the metal cutting attachment balanced by a STIHL servicing dealer.
 - ▶ If you have any queries: Contact your STIHL servicing dealer for assistance.

4.6.5 Battery

The battery is in safe condition when the following conditions are met:

- The battery is not damaged.
- The battery is clean and dry.
- The battery is working and has not been modified.

⚠ WARNING

- The battery cannot function safely if it is not in safe condition. There is a risk of serious injury to persons.
 - ▶ Use an undamaged and functioning battery.
 - ▶ Do not charge a damaged or defective battery.
 - ▶ If the battery is dirty or wet: clean the battery and allow it to dry.
 - ▶ Do not modify the battery.
 - ▶ Do not insert objects into the apertures in the battery.
 - ▶ Never connect the battery terminals to metallic objects and cause a short circuit.
 - ▶ Do not open the battery.
 - ▶ Replace worn or damaged warning signs.
- Fluid may leak from a damaged battery. If the fluid contacts the skin or eyes, this may cause irritation.
 - ▶ Avoid contact with the fluid.
 - ▶ In the event of contact with the skin: wash the affected areas with plenty of soap and water.
 - ▶ In the event of contact with the eyes: rinse the eyes with plenty of water for at least 15 minutes and seek medical attention.

- A damaged or defective battery may emit an unusual odour, smoke or catch fire. This may result in serious or fatal injury to people and damage to property.
 - ▶ If the battery emits an unusual odour or smoke: do not use the battery and keep it away from flammable materials.
 - ▶ If the battery catches fire: try to extinguish the battery using a fire extinguisher or water.

4.7 Operation

⚠ WARNING

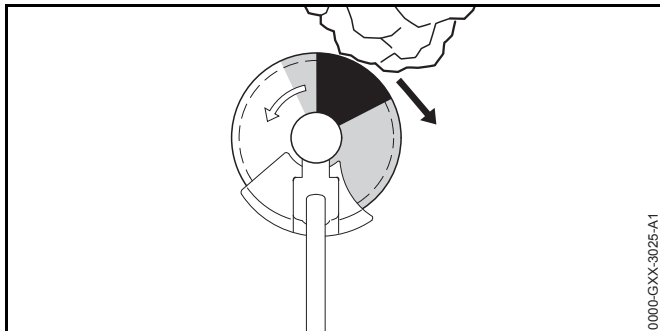
- The user cannot concentrate on the work in certain situations. The user may stumble, fall and be seriously injured.
 - ▶ Work calmly and carefully.
 - ▶ If light and visibility are poor: Do not use your trimmer.
 - ▶ Operate the trimmer alone.
 - ▶ Keep the cutting attachment close to the ground.
 - ▶ Watch out for obstacles.
 - ▶ Stand on the ground while working and keep a good balance.
 - ▶ If you begin to feel tired: Take a break.
- The rotating cutting attachment can cut the user. This can result in serious injuries.
 - ▶ Do not touch the rotating cutting attachment.
 - ▶ If the cutting attachment is blocked by an object: Switch off the trimmer and remove the battery. Then remove the object causing the blockage.
- If the behavior of the trimmer changes during operation or feels unusual, it may no longer be in a safe condition. This can result in serious injuries and damage to property.
 - ▶ Stop work, remove the battery and contact your STIHL servicing dealer for assistance.
- Trimmer vibrations may occur during operation.



- ▶ Wear gloves.

- ▶ Take regular breaks.
- ▶ If signs of circulation problems occur: Seek medical advice.
- If the cutting attachment makes contact with a foreign object during operation, the object or parts of it may be thrown at high speed. This may result in personal injuries and damage to property.
 - ▶ Clear away all foreign objects from the work area.
- If the rotating metal cutting attachment makes contact with a hard object, sparks may occur and the cutting attachment may be damaged. Sparks may cause a fire in an easily combustible location. This can result in serious or fatal injuries and damage to property.
 - ▶ Do not work in an easily combustible location.
 - ▶ Make sure the metal cutting attachment is in a safe condition.
- Note that the cutting attachment continues to rotate for a short period after you release the trigger. This can result in serious injuries.
 - ▶ Wait until the cutting attachment comes to a complete stop.
- In an emergency, the user may panic and not put the carrying system down. This can result in serious injuries.
 - ▶ Practice removing and putting down the carrying system.

4.8 Reactive Forces



Kickout can be caused for the following reasons:

- The shaded area or the black area of the rotating metal cutting attachment comes into contact with a solid object and is suddenly braked.
- The rotating metal cutting attachment gets pinched in the cut.

The risk of kickout is greatest in the black area.


⚠ WARNING

- These situations can abruptly decelerate or stop rotation of the cutting attachment and cause the cutting attachment to be thrown to the right or in the direction of the user (black arrow). The user can lose control of the trimmer. This can result in serious or fatal injuries.
 - ▶ Hold the trimmer firmly with both hands.
 - ▶ Use the working techniques described in this instruction manual.
 - ▶ Do not use the black area for cutting.
 - ▶ Use a combination of cutting attachment, deflector and carrying system recommended in this instruction manual.
 - ▶ Sharpen the metal cutting attachment correctly.
 - ▶ Cut with the motor running at full speed.

4.9 Transporting

4.9.1 Trimmer

⚠ WARNING

- The trimmer may turn over or shift during transport. This may result in personal injuries and damage to property.
 - ▶ Push the retaining latch into position .



- ▶ Remove the battery.

- ▶ If a metal cutting attachment is mounted: Fit the transport guard.

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

4.9.2 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.
 - ▶ Store the battery in non-conductive packaging.
- The battery may turn over or shift during transport. This may result in personal injuries 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.

4.10 Storing

4.10.1 Trimmer


⚠ WARNING

- Children are not aware of and cannot assess the dangers of a trimmer and can be seriously injured.
 - ▶ Push the retaining latch into position .



- ▶ 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.
 - ▶ Push the retaining latch into position .



- ▶ Remove the battery.

- ▶ If a metal cutting attachment is mounted: Fit the transport guard.
- ▶ Store the trimmer in a clean and dry condition.

4.10.2 Battery


⚠ WARNING

- Children are not aware of and cannot assess the dangers of the battery and can be seriously injured.
 - ▶ Store the battery out of the reach of children.
- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions.
 - ▶ Store the battery in a clean and dry condition.
 - ▶ Store the battery in a confined space.

- ▶ Store the battery separately from the trimmer and charger.
- ▶ Store the battery in non-conductive packaging.
- ▶ Use and store the battery at temperatures between -10°C and +50°C.

4.11 Cleaning, Maintenance and Repairs

⚠ WARNING

- The trimmer may start unintentionally if the battery is left in place during cleaning, maintenance or repair operations. This can result in serious injuries and damage to property.
 - ▶ Push the retaining latch into position .



- ▶ Remove the battery.

- Aggressive cleaning agents, a water jet or pointed objects can damage the trimmer, deflector, cutting attachment and the battery. If the trimmer, deflector, cutting attachment or battery are not cleaned correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious injuries.
 - ▶ Clean the trimmer, deflector, cutting attachment and battery as described in this instruction manual.
- If the trimmer, deflector, cutting attachment or battery are not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious or fatal injuries.
 - ▶ Do not attempt to service or repair the trimmer, deflector, cutting attachment or battery.
 - ▶ If the trimmer, deflector, cutting attachment or battery require servicing or repairs: Contact your STIHL servicing dealer for assistance.

- ▶ Maintain the cutting attachment as described in the instructions supplied with the cutting attachment being used or on the cutting attachment's packaging.

5 Preparing Trimmer for Operation

5.1 Preparing Trimmer for Operation

Perform the following steps before starting work:

- ▶ Make sure the following components are in a safe condition:
 - Trimmer, 4.6.1.
 - Deflector, 4.6.2.
 - Mowing head or metal cutting attachment, 4.6.3 or 4.6.4.
 - Battery, 4.6.5.
- ▶ Check the battery, 11.2.
- ▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.
- ▶ Clean the trimmer, 16.1.
- ▶ Mount the handle, 7.1.
- ▶ Select combination of cutting attachment, deflector and carrying system, 21.
- ▶ Mount the deflector, 7.3.1.
- ▶ If a metal cutting attachment is used on a loop-handled trimmer: Mount the barrier bar, 7.2.
- ▶ Mount mowing head or metal cutting attachment, 7.4.1 or 7.5.1.
- ▶ Fit and adjust the carrying system, 8.1.
- ▶ Balance the trimmer, 8.2.
- ▶ Adjust the handle, 8.3.
- ▶ Check the controls, 11.1.
 - ▶ If 3 LEDs flash red while you are checking the controls: Remove the battery and contact your STIHL dealer for assistance.
There is a malfunction in the trimmer.

- ▶ If you cannot carry out this work: Do not use your trimmer and contact your STIHL dealer for assistance.

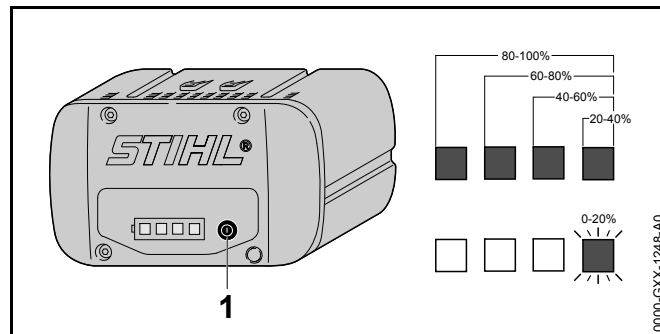
6 Charging the Battery, LEDs

6.1 Charging the Battery

The charging time depends on several factors, e.g. temperature of the battery or the ambient temperature. The actual charging time may differ from the specified charging time. For specified charging times see www.stihl.com/charging-times.

- ▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.

6.2 Displaying State of Charge




- ▶ Press the button (1).
The LEDs (5) glow 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.

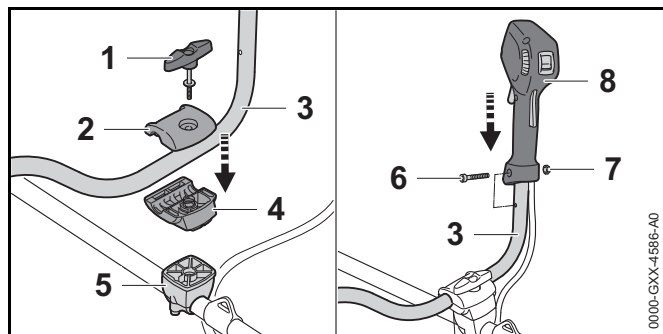
- ▶ If the LEDs glow or flash red: Troubleshooting,  19. Malfunction in trimmer or battery.

7 Assembling the Trimmer

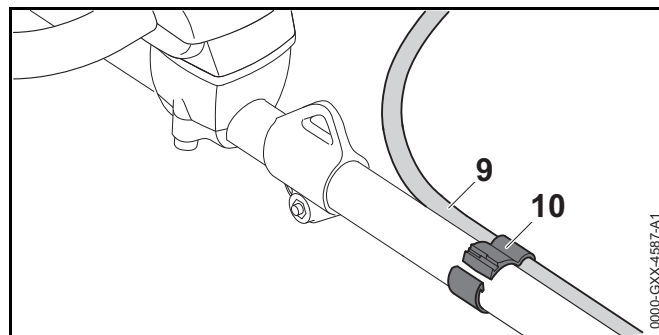
7.1 Mounting the Handle

FSA 90

- ▶ Switch off the brushcutter, push the retaining latch to position  and remove the battery.




- ▶ Remove the wing screw (1).
- ▶ Remove the upper clamp molding (2).
- ▶ Place the handlebar (3) in the lower clamp molding (4).
- ▶ Fit the upper clamp molding (2).
- ▶ Insert the wing screw (1).
- ▶ Swing the handlebar (3) up.
- ▶ Tighten down the wing screw (1).
- ▶ Remove the screw (6).
- ▶ Position the control handle (7) on the handlebar (3), trigger facing the gear housing, and line up the hole in the control handle with the hole in the handlebar.
- ▶ Fit the nut (7).
- ▶ Insert and tighten down the screw (6) firmly.

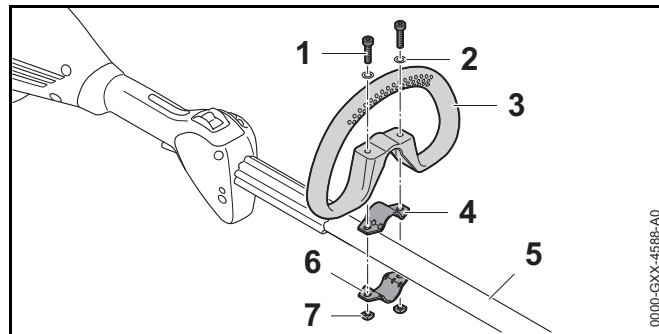


- ▶ Position the throttle cable retainer (10) and the throttle cable (9) on the shaft.
Do not kink the throttle cable or lay it in tight radii – make sure the throttle trigger moves freely.
- ▶ Squeeze the throttle cable retainer (10).
The throttle cable retainer (10) engages in position with an audible click.

The bike handle can be left on the shaft.

FSA 90 R

- ▶ Switch off the brushcutter, push the retaining latch to position  and remove the battery.




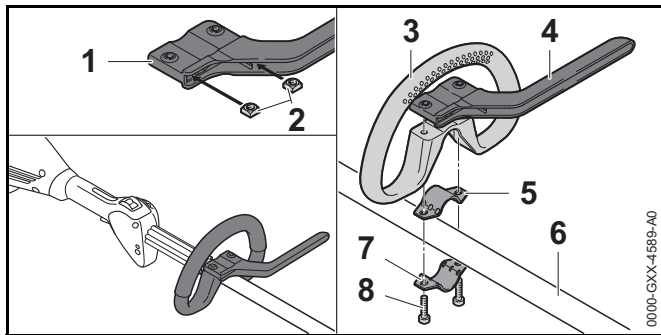
- ▶ Fit the clamp (4) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (4) on the shaft (5).
- ▶ Fit the washers (2) on the screws (1).
- ▶ Press the clamp (6) against the shaft (5).

- ▶ Insert the screws (1) through holes in the loop handle (3) and clamps (4 and 6).
- ▶ Fit and tighten down the nuts (7) firmly.

7.2 Mounting the Barrier Bar

The barrier bar can only be mounted in combination with the loop handle.


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.

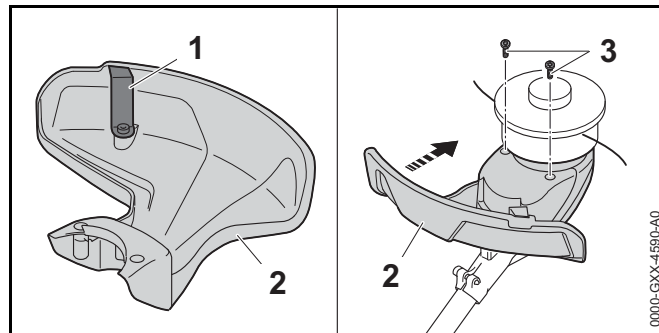


- ▶ Insert nuts (2) in the barrier bar (1) so that the holes line up.
- ▶ Fit the clamp (5) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (5) and barrier bar (4) on the drive tube (6).
- ▶ Hold the clamp (7) against the drive tube (6).
- ▶ Insert and tighten down the screws (8) firmly.

7.3 Mounting and Removing the Deflector

7.3.1 Mounting the Deflector


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.

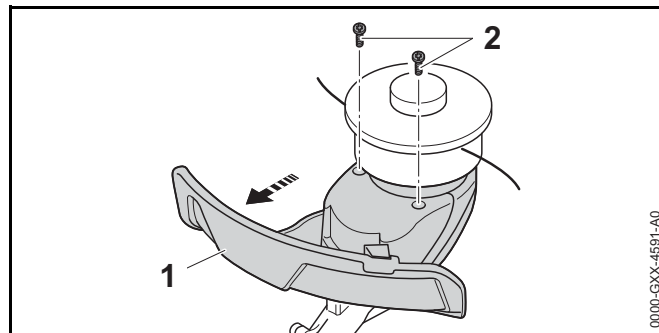


The line limiting blade (1) is already installed in the deflector (2) and must not be removed.

- ▶ Push the deflector (2) into the guides on the housing as far as stop.
- The deflector (2) is tight against the housing.
- ▶ Insert and tighten down the screws (3) firmly.

7.3.2 Removing the Deflector


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.

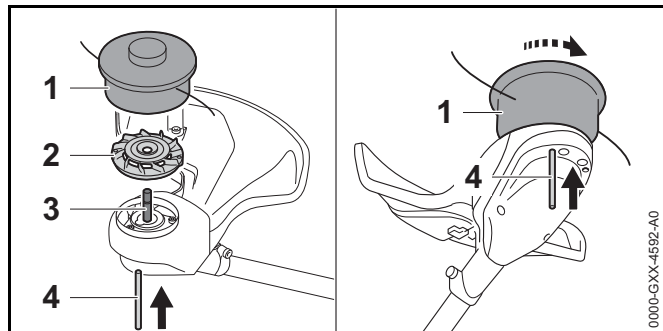


- ▶ Take out the screws (2).
- ▶ Pull off the deflector (1).

7.4 Mounting and Removing the Mowing Head


7.4.1 Mounting the Mowing Head

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.




- ▶ Fit the fanwheel (2) on the shaft (3) with fan blades facing up.
- ▶ Fit the mowing head (1) on the shaft (3) and turn it counterclockwise.
- ▶ Insert the stop pin (4) in the bore as far as stop and hold it depressed.
- ▶ Rotate the mowing head (1) counterclockwise until the stop pin (4) engages in position. The shaft is now blocked.
- ▶ Tighten down the mowing head (1) firmly by hand.
- ▶ Remove the stop pin (4).

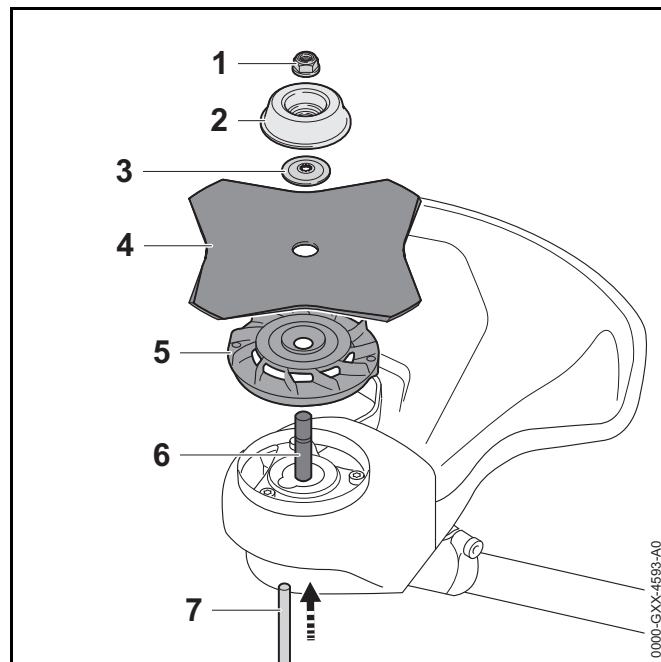
7.4.2 Removing the Mowing Head

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Insert the stop pin in the bore as far as stop and hold it depressed.
- ▶ Rotate the mowing head (3) until the stop pin engages in position. The shaft is now blocked.
- ▶ Unscrew the mowing head clockwise.
- ▶ Remove the fanwheel.
- ▶ Remove stop pin.

7.5 Removing and Installing Metal Cutting Attachment

7.5.1 Mounting Metal Cutting Attachment


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.



- ▶ Fit the fanwheel (5) on the shaft (6) with fan blades facing up.
- ▶ Place the cutting attachment (4) on the fanwheel (5). If you are fitting a circular saw blade or a grass cutting blade with more than 4 cutting edges: Its cutting edges must face in the same direction as the arrow on the deflector.
- ▶ Place the thrust washer (3) on the metal cutting attachment (4) so that its raised side faces up.
- ▶ Place the rider plate (2) on the thrust washer (3) so that its closed side faces up.
- ▶ Insert the stop pin (7) in the bore as far as stop and hold it depressed.

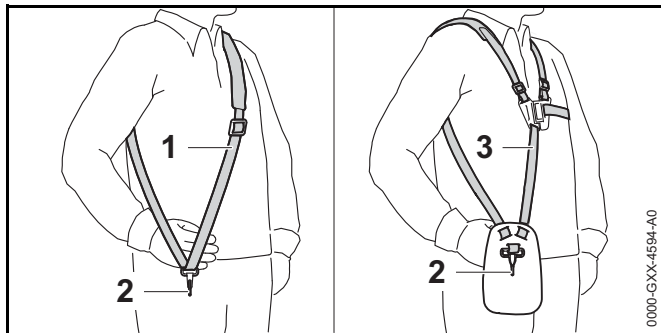
- ▶ Rotate the metal cutting attachment (4) clockwise until the stop pin (7) engages in position.
The shaft (6) is now blocked.
- ▶ Fit the nut (1) counterclockwise and tighten it down firmly.
- ▶ Remove the stop pin (7).

7.5.2 Removing the Metal Cutting Attachment

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Insert the stop pin in the bore as far as stop and hold it depressed.
- ▶ Rotate the metal cutting attachment clockwise until the stop pin engages in position.
The shaft is now blocked.
- ▶ Unscrew the mounting nut clockwise.
- ▶ Remove the rider plate, thrust washer, metal cutting attachment and fanwheel.
- ▶ Remove stop pin.

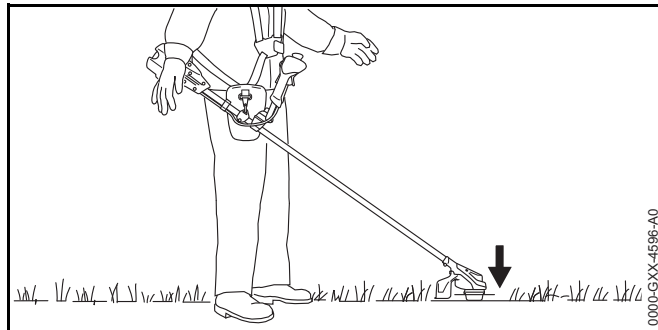
8 Adjusting Trimmer for User

8.1 Fitting and Adjusting the Carrying System




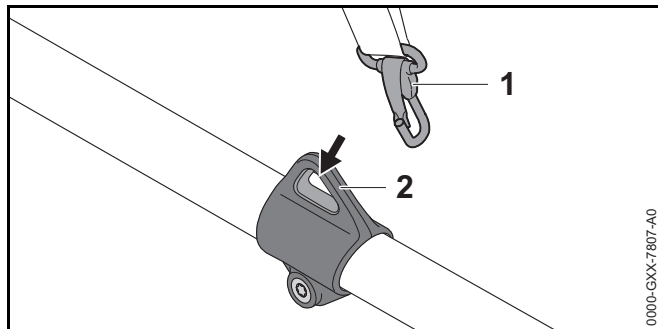
- ▶ Put on the shoulder strap (1) or full harness (3).
- ▶ Adjust the shoulder strap (1) or full harness (3) so that the carabiner (2) is about a hand's width below your right hip.

8.2 Balancing the Trimmer



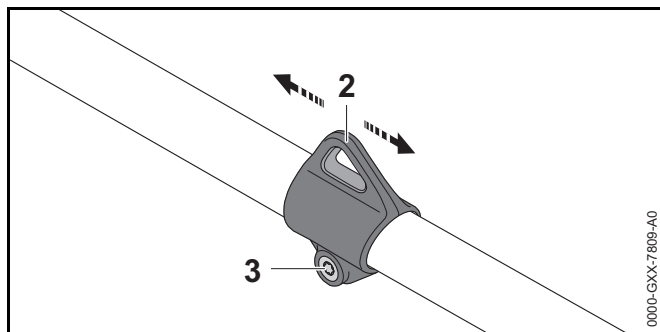
The cutting attachment should rest lightly on the ground.

- ▶ Switch off the trimmer and push retaining latch to position .



- ▶ Connect the carrying ring (1) to the carabiner (2).
- ▶ Wait for the trimmer to stop swinging.

Check position of cutting attachment. If it needs adjustment:




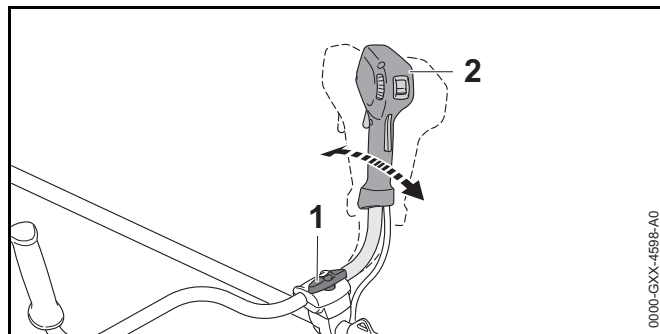
- ▶ Loosen the screw (3).
- ▶ Move carrying ring (2) up or down the drive tube until correct balanced position is reached.
- ▶ Tighten down the screw (3) firmly.

8.3 Adjusting the Handle

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


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.

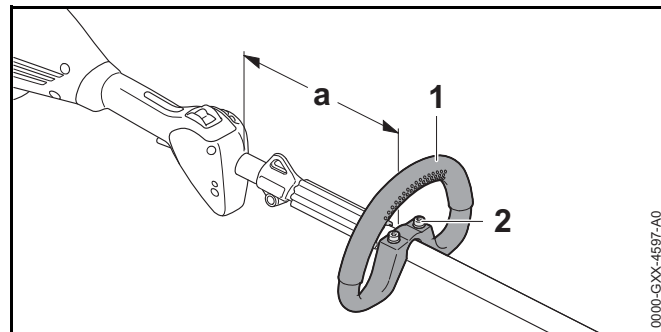


- ▶ Loosen the wing screw (1).
- ▶ Swing the bike handle (2) to the required position.
- ▶ Tighten down the wing screw (1) firmly.

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

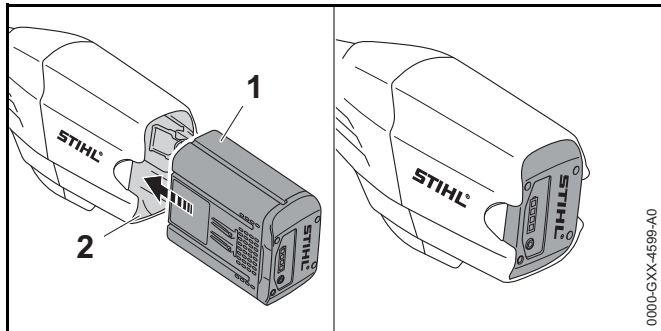
- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.



- ▶ Loosen the screws (2).
- ▶ Move the loop handle (1) to the required position and make sure that:
 - If you are using a mowing head: a = no more than 30 cm
 - If you are using a metal cutting attachment: a = no more than 25 cm
- ▶ Tighten down the screws (2) so that the loop handle cannot be rotated on the drive tube.

9 Removing and Fitting the Battery

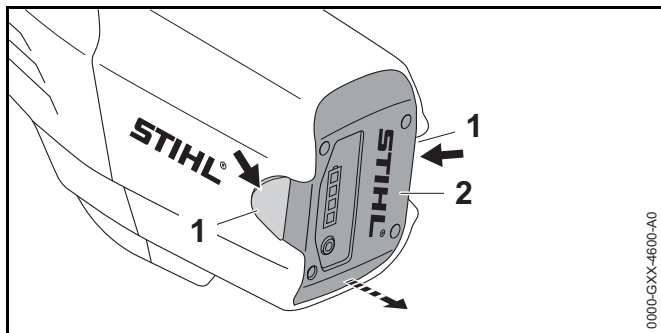
9.1 Fitting the Battery



- ▶ Push the battery (1) into the battery compartment (2) as far as stop.
The battery (1) engages in position with a click.

9.2 Removing the Battery

- ▶ Stand the trimmer on a level surface.
- ▶ Hold one hand in front of the battery compartment to ensure the battery (2) does not fall out.



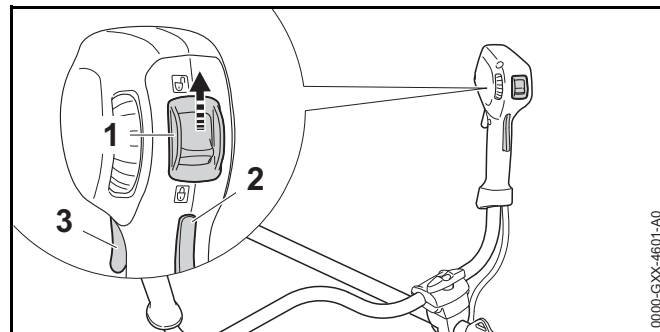
- ▶ Press both locking levers (1).
The battery (2) is unlocked and can be removed.

10 Switching the Trimmer On/Off

10.1 Switching On

FSA 90

- ▶ Hold the trimmer firmly with your right hand on the control handle – wrap your thumb around the handle.
- ▶ Hold the trimmer firmly with your the left hand on the left handle – wrap your thumb around the handle.

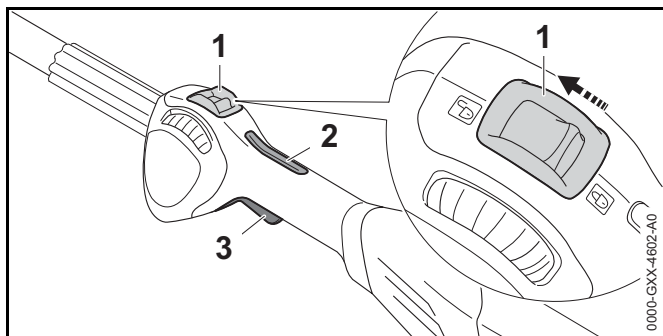



- ▶ Push the retaining latch (1) with your thumb to position 1.
- ▶ Depress the trigger lockout (2) with your hand and hold it there.
- ▶ Pull the trigger (3) with your index finger and hold it there.
The motor accelerates and the cutting attachment rotates.

The speed of the cutting attachment is controlled with the trigger.


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- ▶ Hold the trimmer firmly with one hand on the control handle – wrap your thumb around the handle.
- ▶ Hold the trimmer firmly with the other hand on the loop handle – wrap your thumb around the handle.



- ▶ Push the retaining latch (1) with your thumb to position .
- ▶ Depress the trigger lockout (2) with your hand and hold it there.
- ▶ Pull the trigger (3) with your index finger and hold it there. The motor accelerates and the cutting attachment rotates. The speed of the cutting attachment is controlled with the trigger.


10.2 Switching Off


- ▶ Release the trigger and trigger lockout lever.
- ▶ Wait for the cutting attachment to come to a standstill.
- ▶ If the cutting attachment continues to rotate: Remove the battery and contact your STIHL servicing dealer for assistance. The trimmer has a malfunction.
- ▶ Push the retaining latch into position .

11 Testing the Trimmer and Battery

11.1 Checking the Controls

Trigger lockout lever and trigger

- ▶ Remove the battery.
- ▶ Push the retaining latch into position .
- ▶ Attempt to pull the trigger without depressing the lockout lever.

- ▶ If the trigger can be pulled: Do not use your trimmer and contact your STIHL dealer for assistance. Retaining latch or trigger lockout is faulty.
- ▶ Push the retaining latch into position .
- ▶ Depress the trigger lockout lever and hold it in that position.
- ▶ Pull the trigger.
- ▶ Release the trigger and trigger lockout lever.
- ▶ If the trigger or trigger lockout is stiff or does not spring back to the idle position: Do not use your trimmer and contact your STIHL dealer for assistance. Trigger or trigger lockout is faulty.

Switching On

- ▶ Fit the battery.
- ▶ Depress the trigger lockout lever and hold it in that position.
- ▶ Pull the trigger and hold it there. The cutting attachment rotates.
- ▶ If 3 LEDs on the battery flash red: Remove the battery and contact your STIHL dealer for assistance. There is a malfunction in the trimmer.
- ▶ Release the trigger and trigger lockout lever. The cutting attachment comes to a standstill.
- ▶ If the cutting attachment continues to rotate: Remove the battery and contact your STIHL dealer for assistance. The trimmer has a malfunction.

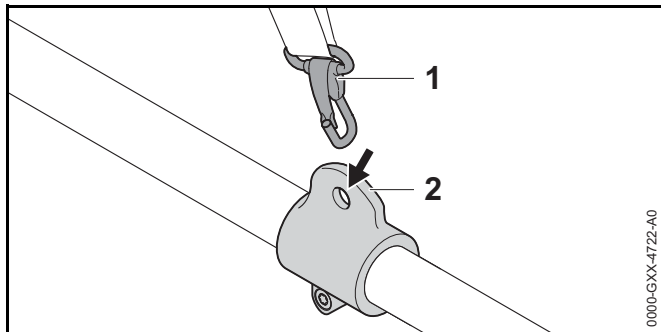
11.2 Testing the Battery

- ▶ 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.

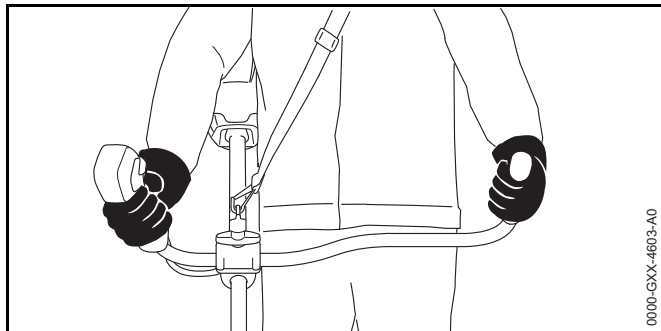
12 Operating the Trimmer

12.1 Holding and Controlling the Trimmer

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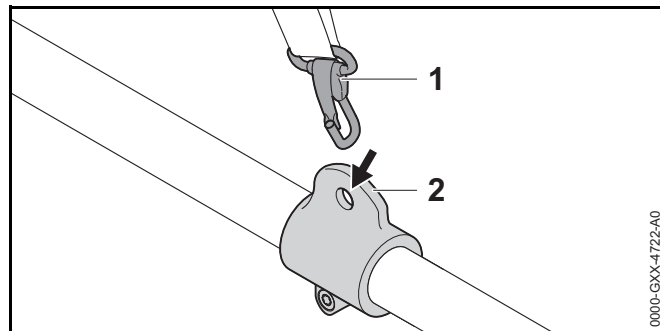


- Connect the carrying ring (2) to the carabiner (1).



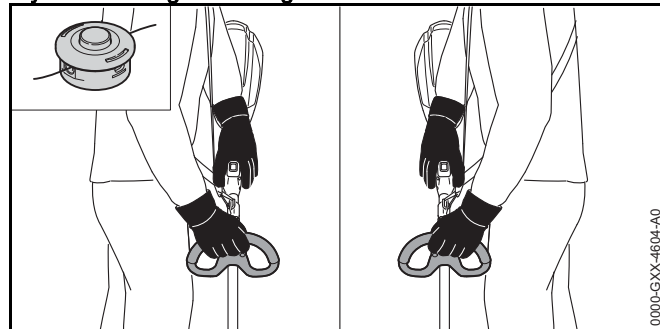
- Hold the trimmer with your right hand on the control handle – wrap your thumb around the control handle.
- Hold the trimmer with your the left hand on the left grip – wrap your thumb around the left grip.

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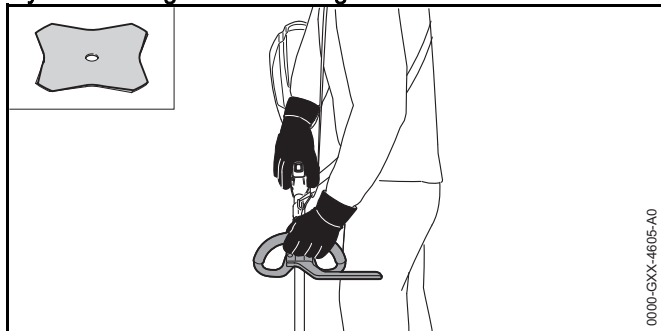
- Connect the carrying ring (2) to the carabiner (1).

If you are using a mowing head:



- Hold the trimmer with one hand on the control handle – wrap your thumb around the control handle.
- Hold the trimmer with your other hand on the loop handle – wrap your thumb around the loop handle.

If you are using a metal cutting attachment:

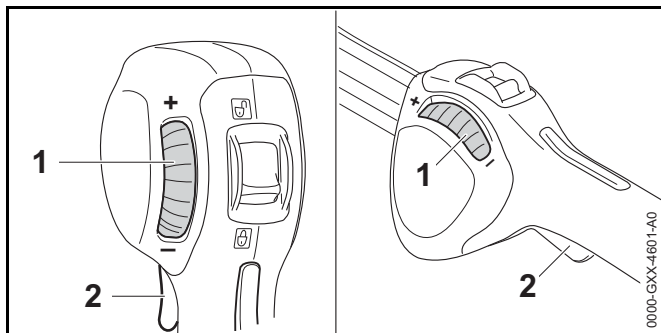


- ▶ Hold the trimmer with your right hand on the control handle – wrap your thumb around the control handle.
- ▶ Hold the trimmer with your left hand on the loop handle – wrap your thumb around the loop handle.

12.2 Setting the Power Level

The power level is infinitely variable to suit the application. The higher the power level, the faster the cutting attachment can run.

The selected power level affects the battery's runtime. The lower the power level, the longer the battery's runtime.



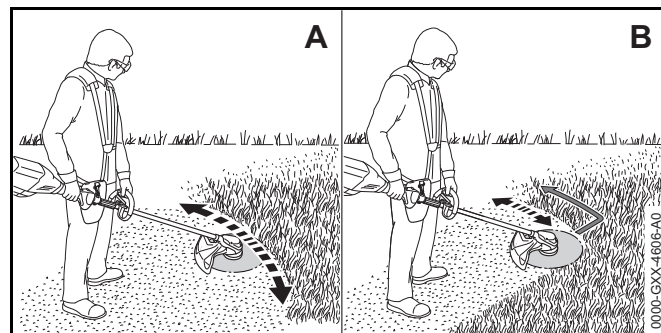
If the set wheel (1) is turned in "-" direction, the trigger (2) can no longer be fully depressed. The power level is lower. The cutting attachment rotates at a lower RPM.

If the set wheel (1) is turned in "+" direction, the trigger (2) can still be fully depressed. The power level is higher. The cutting attachment rotates at a higher RPM.

- ▶ Turn the set wheel (1) to the required position.

12.3 Mowing

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

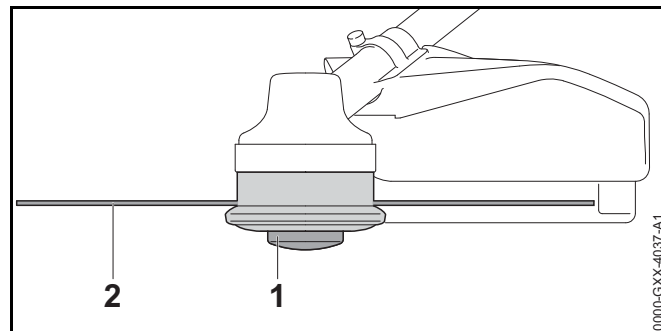


- ▶ Swing the trimmer back and forth in an arc (A).
- ▶ If you are using a metal cutting attachment: Mow with the left-hand side on the metal cutting attachment (B).
- ▶ Walk slowly and steadily forwards.


12.4 Adjusting Nylon Line

12.4.1 Line Feed on AutoCut Mowing Head

- ▶ Tap the rotating mowing head on the ground. About 30 mm of fresh nylon line is advanced. The line limiting blade in the deflector trims 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 trimmer, push retaining latch to position  and remove the battery.
- ▶ Depress the spool (1) on the mowing head and hold it depressed.
- ▶ Pull out the mowing lines (2).
- ▶ 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.

12.4.2 Line Feed on SuperCut Mowing Head


Mowing lines are advanced automatically. The line limiting blade in the deflector trims the mowing lines to the correct length.

Automatic feed will not take place if the mowing lines are shorter than 40 mm.

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Pull out the mowing lines.
- ▶ If the mowing lines cannot be pulled out to required length: Replace nylon line. The spool is empty.

13 After Finishing Work


13.1 After Finishing Work

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If the trimmer is wet: Allow the trimmer to dry.
- ▶ If the battery is wet: Allow the battery to dry.
- ▶ Clean the trimmer.
- ▶ Clean the deflector.
- ▶ Clean the cutting attachment.
- ▶ Clean the battery.

- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.

14 Transporting

14.1 Transporting the brushcutter

- ▶ Switch off the brushcutter, push the retaining latch to position  and remove the battery.
- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.

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.

14.2 Transporting the Battery

- ▶ Switch off the trimmer and remove the battery.
- ▶ Make sure the battery is in a safe condition.
- ▶ Observe the following points when packing the battery:
 - The packaging must be non-conductive.
 - Make sure the battery cannot shift inside the packaging.
- ▶ Secure the packaging so that it cannot move.


The battery is subject to the requirements for the transport of dangerous goods. The battery is classified as UN 3480 (lithium-ion batteries) and has been tested in accordance with UN Manual of Tests and Criteria, Part III, sub-section 38.3.

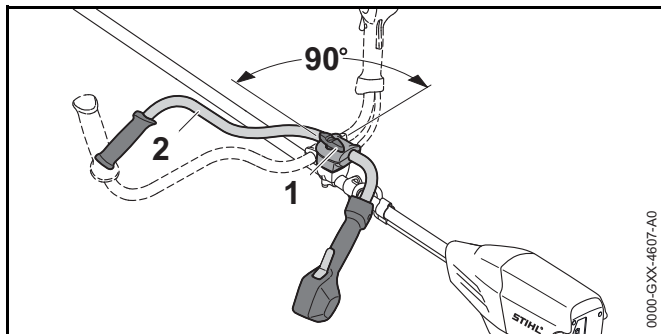
For transport regulations see www.stihl.com/safety-data-sheets

15 Storing

15.1 Storing the Trimmer


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- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.



- ▶ Loosen the wing screw (1) and unscrew it until the handlebar (2) can be rotated.
- ▶ Turn the handlebar (2) through 90° and fold it down.
- ▶ Tighten down the wing screw (1) firmly.
- ▶ Observe the following points when storing the trimmer:
 - The trimmer is out of the reach of children.
 - The trimmer is clean and dry.
- ▶ If you store the trimmer for more than 3 months: Remove the cutting attachment.

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- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.
- ▶ Observe the following points when storing the trimmer:

- The trimmer is out of the reach of children.
- The trimmer is clean and dry.
- ▶ If you store the trimmer for more than 3 months: Remove the cutting attachment.


15.2 Storing the Battery

STIHL recommends that you store the battery with a charge between 40 % and 60 % (2 LEDs glow green).


- ▶ Observe the following points when storing the battery:
 - Battery is out of the reach of children.
 - Battery is clean and dry.
 - Battery is in an enclosed space.
 - Store the battery separately from the trimmer and charger.
 - Battery is in non-conductive packaging.
 - Battery is in a temperature range between -10°C and +50°C.

16 Cleaning

16.1 Cleaning the Trimmer

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Clean the trimmer with a damp cloth.
- ▶ Remove foreign matter from the battery compartment and clean the battery compartment with a damp cloth.
- ▶ Clean electrical contacts in the battery compartment with a soft brush.

16.2 Cleaning the Deflector and Cutting Attachment

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Clean the deflector and cutting attachment with a damp cloth or a soft brush.

16.3 Cleaning the Battery

- Clean the battery with a damp cloth.

17 Maintenance

17.1 Sharpening and Balancing a Metal Cutting Attachment

Correctly sharpening and balancing metal cutting attachments requires a lot of practice.

STIHL recommends you have metal cutting attachments resharpened and balanced by a STIHL servicing dealer.

- Sharpen the metal cutting attachment as described in the instructions and on the packaging supplied with the cutting attachment you are using.

18 Repairing

18.1 Repairing the Trimmer and Cutting Attachment

The trimmer and cutting attachment cannot be repaired by the user.

- If the trimmer or cutting attachment is damaged: Do not use your trimmer or cutting attachment and contact your STIHL servicing dealer.

18.2 Servicing and Repairing the Battery

The battery requires no servicing and cannot be repaired.

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

19 Troubleshooting

19.1 Troubleshooting Brushcutter or Battery

Fault	LEDs on the battery	Cause	Remedy
The brushcutter does not start when switched on.	1 LED flashing green.	State of charge of the battery is too low.	► Recharge the battery fully as described in the User Manual for the STIHL AL 101, 300, 500 chargers.
	1 LED emits red light.	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 electrical contacts in the battery compartment. ► Insert battery. ► Switch on the brushcutter. ► If 3 LEDs continue to flash red: Do not use your brushcutter and contact your STIHL dealer for assistance.
	3 LEDs light up red.	Trimmer is too hot.	► Remove the battery. ► Allow trimmer to cool down.
	4 LEDs flashing red.	There is a fault in the battery.	► Remove battery and reinsert it. ► Switch on the brushcutter. ► If 4 LEDs continue to flash red: Do not use the battery and contact your STIHL dealer for assistance.
		No electrical contact between brushcutter and battery.	► Remove the battery. ► Clean electrical contacts in the battery compartment. ► Insert battery.
		The brushcutter or battery is damp.	► Allow the brushcutter or battery to dry.
The brushcutter cuts out during operation.	3 LEDs light up red.	Trimmer is too hot.	► Remove the battery. ► Allow trimmer to cool down.

Fault	LEDs on the battery	Cause	Remedy
		There is an electrical fault.	<ul style="list-style-type: none">▶ 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, 300, 500 chargers.
		The battery life has been exceeded.	▶ Replace battery.

20 Specifications

20.1 STIHL FSA 90, FSA 90 R Trimmers

FSA 90

- Approved batteries:
 - STIHL AP
 - STIHL AR
- Weight without battery, cutting attachment and deflector: 3.2 kg
- Length without cutting attachment: 1774 mm

FSA 90 R

- Approved batteries:
 - STIHL AP
 - STIHL AR
- Weight without battery, cutting attachment and deflector: 2.8 kg
- Length without cutting attachment: 1774 mm

For battery life 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
- Permissible temperature range for operation and storage: -10°C to +50°C

20.3 Noise and Vibration Data

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

FSA 90

STIHL recommends that you wear hearing protection.

Using with a mowing head:

- Sound pressure level L_{pA} measured according to EN 50636-2-91: 83 dB(A)
- Sound power level L_{wA} measured according to EN 50636-2-91: 92 dB(A)
- Vibration level a_{hv} measured according to EN 50636-2-91
 - Control handle: 3.5 m/s².
 - Left handle: 3.5 m/s²

Using with a metal cutting attachment:

- Sound pressure level L_{pA} measured according to EN 50636-2-91: 73 dB(A)
- Sound power level L_{wA} measured according to EN 50636-2-91: 84 dB(A)
- Vibration level a_{hv} measured according to EN 50636-2-91
 - Control handle: 1.0 m/s².
 - Left handle: 1.0 m/s²

FSA 90 R

STIHL recommends that you wear hearing protection.

Using with a mowing head:

- Sound pressure level L_{pA} measured according to EN 50636-2-91: 83 dB(A)
- Sound power level L_{wA} measured according to EN 50636-2-91: 92 dB(A)
- Vibration level a_{hv} measured according to EN 50636-2-91
 - Control handle: 3.5 m/s².

- Left handle: 4.8 m/s²

Using with a metal cutting attachment:

- Sound pressure level L_{pA} measured according to EN 50636-2-91: 73 dB(A)
- Sound power level L_{wA} measured according to EN 50636-2-91: 84 dB(A)
- Vibration level a_{hv} measured according to EN 50636-2-91
 - Control handle: 1.4 m/s².
 - Left handle: 1.4 m/s²

The vibration values quoted above have been measured according to a standardized test procedure and may be used to compare electric power tools. Depending on the type of usage, the vibrations that actually occur may differ from the values quoted. The vibration values quoted may be used for an initial assessment of the user's exposure to vibrations. The actual exposure to vibrations has to be estimated. This process may also take into account times during which the electric power tool is switched off and times during which it is switched on but running off load.

Information on compliance with Vibration Directive 2002/44/EC is available at www.stihl.com/vib.

20.4 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, Deflectors and Carrying Systems

21.1 Combinations of Cutting Attachments, Deflectors and Carrying Systems

FSA 90

Cutting Attachment	Deflector	Carrying System
Mowing head with 2.4 mm diameter “round, quiet” nylon line: – AutoCut 25-2 mowing head – DuroCut 20-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head Mowing head with 2.7 mm diameter “round, quiet” nylon line: – AutoCut 25-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head	– Deflector for mowing heads	– Shoulder strap – Full harness – STIHL AR battery with hip padding – “AP belt bag with connecting cable” together with shoulder strap – Carrying system with built-in “AP belt bag with connecting cable” together with hip padding
– Grass cutting blade 230-2 – Grass cutting blade 230-4 – Grass cutting blade 230-8 – Grass cutting blade 260-2	– Deflector for metal cutting attachments	

FSA 90 R

Cutting Attachment	Deflector	Barrier Bar	Carrying System
Mowing head with 2.4 mm diameter “round, quiet” nylon line: – AutoCut 25-2 mowing head – DuroCut 20-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head Mowing head with 2.7 mm diameter “round, quiet” nylon line: – AutoCut 25-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head	– Deflector for mowing heads	– optional	– Shoulder strap – Full harness – STIHL AR battery with hip padding – “AP belt bag with connecting cable” together with shoulder strap – Carrying system with built-in “AP belt bag with connecting cable” together with hip padding
– Grass cutting blade 230-2 – Grass cutting blade 230-4 – Grass cutting blade 230-8 – Grass cutting blade 260-2	– Deflector for metal cutting attachments	– mandatory	

22 Spare Parts and Accessories

22.1 Spare Parts and Accessories



These symbols identify original STIHL replacement parts and original STIHL accessories.

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

Original STIHL replacement parts and original STIHL accessories are available from STIHL servicing dealers.

23 Disposal

23.1 Disposing of Trimmer and Battery

Contact your STIHL servicing dealer for information on disposal.

- ▶ Dispose of the trimmer, deflector, cutting attachment, battery, charger, accessories and packaging in accordance with local regulations and environmental requirements.

24 EC Declaration of Conformity

24.1 STIHL FSA 90, FSA 90 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 90, FSA 90 R

- serial number: 4863

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 VIII.

- Measured sound power level: 92 dB(A)
- Guaranteed sound power level: 94 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.

Done at Waiblingen, 03.02.2020

ANDREAS STIHL AG & Co. KG

pp

Dr. Jürgen Hoffmann, Head of Product Data, Regulations and Licensing