



EN

Before using warnings	01
Assembly components	02
Insert airbag	03
Charging	04
Loading	05
Activating	06
After deployment	07
Maintenance	08
Storage & transport	09
Liability	10



Carefully read operating instructions before use and keep them for the duration of use!

Purpose | Area of application

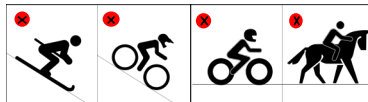
The AEROBAG plugin system, with back protector, has been specifically designed for cycling, including road racing, trekking, and E-bike use. The system is engineered to be compact and lightweight. When used as personal protective equipment (PPE), the AEROBAG plugin system may only be used in combination with certified garments. The purpose of the airbag system is to help reduce the risk of serious injuries in the event of a fall, particularly to the hips, neck, and chest.

The system cannot guarantee protection in all circumstances. This includes situations such as direct collisions with objects where the cyclist does not fall from the bicycle.

The airbag system does not replace the need to wear a certified bicycle helmet. The system is designed for use within an optimal temperature range of 0°C to +40°C.

Restrictions on use | exclusion

The AEROBAG plugin system is designed exclusively for the context of use described in the paragraph "Purpose | area of application". The airbag is not suitable for other purposes, in particular horse riding, skiing, BMX, motor sports or for use on motorised vehicles such as scooters, quads, segways or other comparable sports.



- **Helmet requirement:** The airbag system does not replace a bicycle helmet. It must be worn in combination with a certified helmet.
- **Medical warning:** The activation buckle contains a magnet. Users with pacemakers or defibrillators should consult a doctor, as magnets may interfere with electronic implants

01 Before using

The AEROBAG plugin system



The AEROBAG may only be used for cycling; the airbag system must be deactivated for all other activities. Please follow the section “Activating and deactivating the system” for instructions.

- Do not hop your bicycle off kerbs or off or over similar obstacles
- Do not ride down stairways or steps
- Do not use the personal protective equipment (PPE) for mountain biking
- Do not use the PPE in a bike park or on trails
- Do not wear clothing that could impair the function of the airbag.
- This includes thick scarves, thick hoods or similar bulky clothing.
- Do not use lifts, stairs or similar fast accelerating vehicles when the system is activated.

Sizing

A proper fit is essential to effectively protect key areas. To determine the correct airbag size, refer to the “Sizing” chapter. Always check that the purchased size, after integration into the apparel, properly covers the critical zones (chest, hips, and neck). Choose a different size if necessary.

Clothing

Clothing worn over the airbag must allow sufficient stretch and space to enable proper deployment. Tight or restrictive garments can prevent the airbag from inflating correctly.

Check if the AEROBAG plugin system is fully functional

Be aware that carrying sharp or pointed objects may impair the protective function of all protective devices.

Protection against all injuries cannot be guaranteed. This includes twisting, over extension or compression, as well as spinal compression fractures.

Safety information

The AEROBAG plugin system is only capable of reducing the risk of serious injury caused by an impact if it is worn correctly. Please observe the section: "Insert airbag".

No modifications may be made to the AEROBAG plugin system or the back protector to ensure that the protective function is guaranteed in all circumstances. Modifications will invalidate all warranty claims. The flexibility of the back protector is ensured by its surface material properties; however, the protector should not be deformed.

Functionality

AEROBAG is a sensor-controlled protector designed to reduce impact forces during a fall. The USB-C rechargeable sensors analyze the position and orientation of the AEROBAG and the cyclist more than 300 times per second.

When the defined activation conditions are met, the system responds, and the inflator fills the airbag with CO₂ within milliseconds. This ensures the full protective effect of the airbag is deployed. After deployment, the airbag automatically returns to its original shape. In case of activation and after checking the airbag for any damage, the system can be used again with a new inflator.

Technical parameters

- Airbag volume: 10-15 litres depending on the size
- Under 120 ms to full inflation of the airbag
- 25-30 hours battery life
- Optimal application and temperature range from 0°C to +40°C

01 Warnings

The system

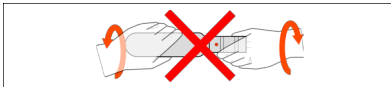
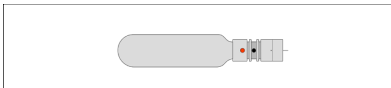


Activation

Do not cycle with the Aerobag plug-in when the buckle is not closed, when the battery status is low or when the airbag has a malfunction. Only use and cycle with the Aerobag plug-in when the buckle is closed and the LED indicator is green.

Inflator

Do not unscrew any part of the inflator. Keep this component intact at all times.



Deployment limitations

The airbag is designed to deploy in case of a fall or crash. It is not guaranteed to activate in sudden external impacts, such as a vehicle collision or direct forceful hits.

Deactivate the system

- Open the buckle to deactivate the system.
- Keep the triggering buckle in the park position.
- Remove the inflator from the inflation control unit to prevent accidental deployment.

As described in the chapter "After Deployment."

Water Resistance

Be aware that the AEROBAG plugin system is not fully waterproof. Heavy rain or excess moisture may cause the airbag to malfunction. Avoid water contact with the plugin area and use the system in dry conditions to ensure proper function and safety.

App

To get the most out of your AEROBAG plugin system, we recommend using the AEROBAG app. Once you have registered, you will have access to the latest software updates for your airbag system. In addition, the app allows you to easily view the serial number, registration status, and battery level.



iOS App
Store



Android Play
Store

Instruction video channel

Instructional videos are available to support correct setup and use of the system. Please refer to the videos on <https://www.aerobag.eu/> for clear, step-by-step guidance.

Sizing

Ensure that the correct size is selected and that the system is properly positioned according to the wearer's upper body length.

The airbag and back protector only provide protection to the chest, neck, and hips that they cover. Maximum protection is achieved only when the system is correctly positioned as intended.



1

**AEROBAG
plugin size**

Torso Length: 43–47 cm | **Body Height:** 155–175 cm



2

**AEROBAG
plugin size**

Torso Length: 48–52 cm | **Body Height:** 175–200 cm

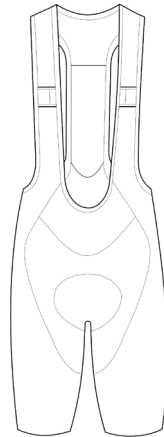
02 Assembly components

AEROBAG plugin system + certified bib shorts

To use the AEROBAG plug-in system, it must be integrated into an AEROBAG-certified bib short. The critical components required for proper integration are visually illustrated in the section “Assembly Components – AEROBAG Certified Bib Shorts”.

The use of a certified bib short is mandatory to ensure sufficient stretch and space for correct airbag deployment.

Certified bib shorts are available from suppliers listed on <https://www.aerobag.eu/>.

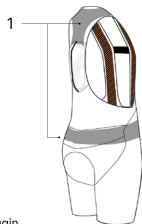


02 Assembly components

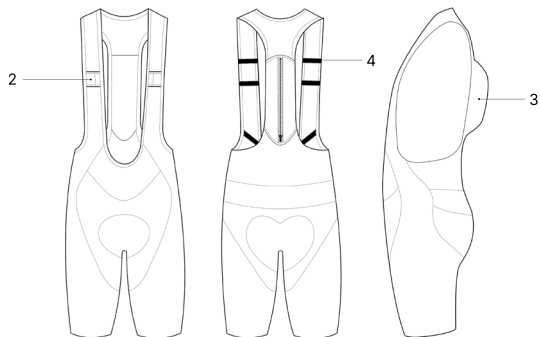
AEROBAG certified bib shorts

Illustrations may vary by brand.

1. AEROBAG plugin system
2. Buckle park position
3. Plugin back pocket
4. Elastic loops



Bib shorts +
AEROBAG plugin



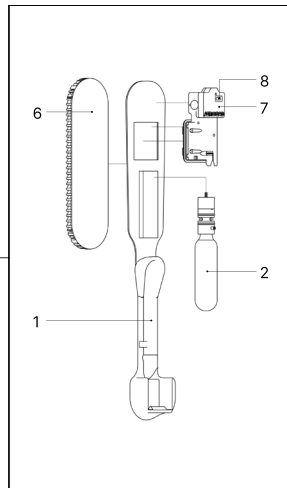
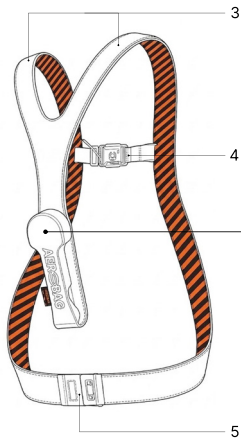
Bib shorts

02 Assembly components

AEROBAG plugin system

1. Inflator protector cover
2. Inflator
3. Airbag sleeves
4. Buckle with LED indicator
5. Hip sleeve connector
6. Protector shield
7. Inflation control unit
8. USB-C charging port

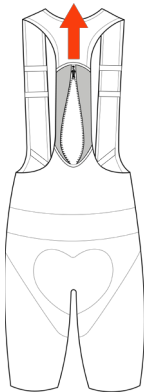




-  Bodyside
 Airside



03 Insert airbag


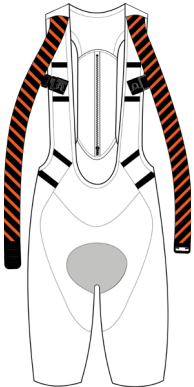

Correct fit

The steps may vary slightly depending on the bib shorts in which the airbag is integrated.

 <p>01</p>	 <p>02</p>	 <p>03</p>	<p>01 Open back pocket</p> <p>02 AEROBAG plugin system Turn it so the black side faces you.</p> <p>03 Insert sleeves Pull the sleeves through the pocket as far as possible so the airbag is fully positioned at the neck.</p> <p>Ensure the sleeve orientation is correct:</p> <div data-bbox="943 762 1240 850"> Bodyside  Airside</div>
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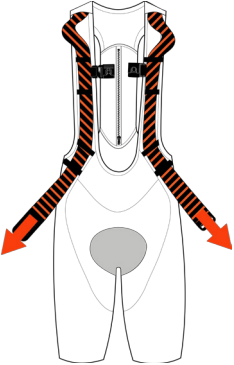
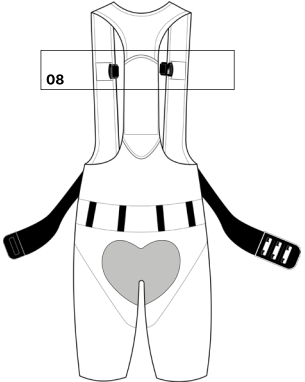
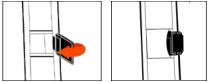
03 Insert airbag

Correct fit

 <p>04</p>	 <p>05</p>	<p>04 Close the back pocket</p> <p>05 Turn bib shorts inside out</p> <p> Position it with the front facing you.</p>
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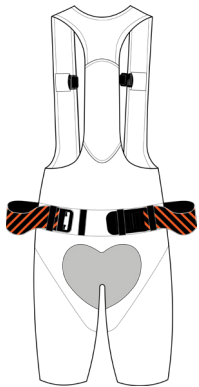
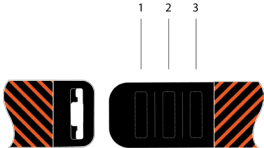
03 Insert airbag

Correct fit

 <p>06</p>	 <p>07</p>	<p>06 Sleeves Slide the sleeves through the elastic bands, ensuring the orange stripe pattern is visible.</p> <p>07 Turn over Turn over the bib shorts so the back is facing towards you.</p> <p>08 Park position Insert both sides of the buckle into the buckle park position.</p> 
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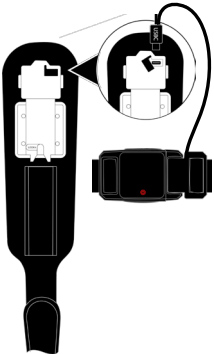

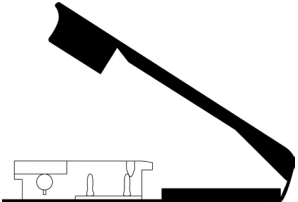
03 Insert airbag

Correct fit

 <p>09</p>	 <p>10</p>	<p>09 Sleeves Slide the sleeves through the final loops.</p>	<p>10 Connect Fasten the hip sleeve connectors together to the desired fit.</p>
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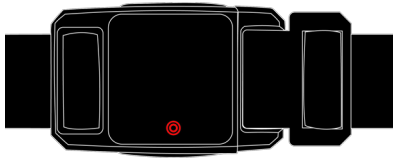
04 Charging

The system

 <p>01</p>	 <p>03</p>	 <p>Before using the AEROBAG, ensure it is fully charged and that no inflator is inserted.</p>
 <p>02</p>		<p>01/02 Open cover Lift the head upward.</p>
		<p>03 Charge Remove the USB-C cover and charge using a USB-C cable.</p>

04 Charging

The system

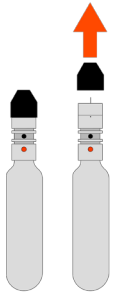
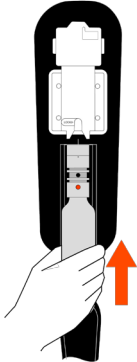
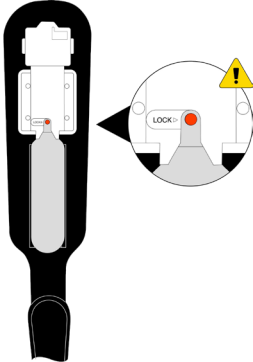



04 Indication

The LED on the chest buckle flashes red during charging and turns off once fully charged. Please refer to the 'Activating' chapter for the legend of LED indicators.

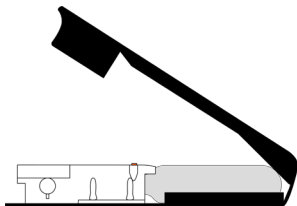
05 Insert

The inflator

 <p>01</p>	 <p>02</p>	 <p>03</p>	<p> Before inserting the inflator, make sure the activation buckle is not connected.</p> <p>01 Cap Remove the black cap from the inflator.</p> <p>02 Insert Push the inflator in until the orange pin locks.</p> <p>03 Correct position The inflator should slide in easily and be positioned next to the lock indicator.</p>
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05 Insert

The inflator



04



05



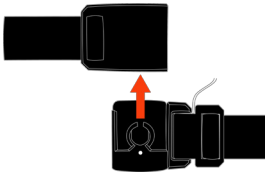
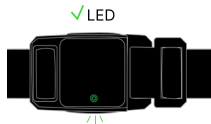
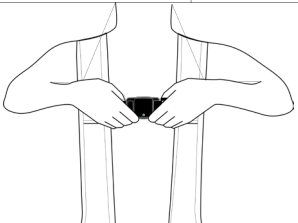

06







04/05 Close cover
Close the cover over the
inflation control unit.

06 Close back pocket

06 Activating

The system

01 	02 	<p>01/02 Activate/ deactivate The AEROBAG plug-in system is activated and deactivated via the chest strap buckle.</p> <p>Closing the buckle initiates a system check of the battery status and inflator function.</p>
03 		<p>03 Charge The LED on the buckle flashes green when the system is ready and has over 4 hours of battery life.</p> <p> • Activate only before cycling. • Otherwise, store the buckle in the park position. • Use only when the LED shows it's ready.</p>

LED colour	Meaning
 Flashing green	System is in use and will operate for at least another 4 hours
 Flashing red/green	System is in use and will operate for less than 4 hours. If possible, stop using the system and charge it immediately, otherwise an undesired system failure may occur.
 Flashing red	The system is charging; the LED will stop flashing as soon as the battery is fully charged.
 Continuous red	The system is not ready for use. First follow the troubleshooting procedure or contact our service team.
Fault description	Meaning
 Flashing red/green	Red/green flashing is a warning signal and means that the battery life is limited to just 4h. Charge the system and check the charge status. If the LED continues to flash red/green after charging for 3h, check the plug connection between the triggering unit and charging cable. Contact our service team if the LED continues to flash red/green.
 Continuous red	The system is not ready for operation if the LED indicates red. In this case, check whether the inflator is still full and/or use a new one if necessary. Make sure that the inflator is correctly connected. Contact our service team if the LED continues to indicate red.
The system does not react	First, fully charge the system and re-install the inflator. Contact our service team if the system still does not react.
The inflator cannot be connected	The inflator must be inserted into the triggering unit overcoming slight resistance. When connecting, ensure that the inflator contacts are correctly inserted into the triggering unit and that the locking pin is fully extended. Please contact our service team if you have any questions.

07 After deployment

Inspection

Reusing the AEROBAG plugin system

When the triggering parameters are reached during a fall or a fall-like situation, the AEROBAG plugin system is automatically deployed, and the LED on the chest strap buckle lights up continuously in red.

The airbag returns to its original position about 30 seconds.

After a visual inspection and the installation of a new, original inflator, the system can be restored to full functionality.

Recycle

Used inflators can be returned. In exchange, you will receive a discount on your next purchase. More information can be found on the AEROBAG website.

After deployment inspection

After each deployment, fall, or impact, check the AEROBAG plugin system for proper function. Ensure the bib shorts, straps, buckle, and clips are undamaged. Visually inspect the airbag for abrasions, tears, or cuts, and check the inflation protector cover and control unit before refitting the system.

Safety information

- Ensure that all straps, buckles and clip fasteners are tightly closed and not damaged.
- Observe the green LED on the triggering buckle, which indicates that the AEROBAG plugin system is functioning properly and ready for use.
- Be particularly vigilant to open the chest strap triggering buckle immediately after each ride, thereby deactivating the system.

08 Maintenance

Care & cleaning



Remove inflator

Always ensure that you **FIRST** remove the inflator before removing the system!

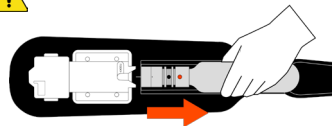
Care & cleaning

First, remove the AEROBAG plugin system from the bib short by following the steps in "Insert Airbag - correct fit" in reverse order. Follow the washing instructions provided by the clothing brand.

If the plugin sleeves are dirty, they can be cleaned with a damp cloth or gently hand-washed. Although the system is splash-proof, avoid direct contact between the triggering unit and water or other liquids.

Removing and refitting the AEROBAG plugin system

First, ensure that the system is deactivated by opening the buckle. Then remove the inflator by pulling it out of the inflation control unit and fit it with the appropriate protective cap.



WARNING: When replacing the inflator, remove the entire unit. **DO NOT** unscrew the CO₂ cartridge from the upper activation unit.

09 Storage & transport

Inspection

Storage

For transporting or storing the AEROBAG plugin system, the system must be deactivated. Place the buckles in the park position on the shoulder straps to prevent accidental system activation.

Deeply discharging the battery should be avoided; a charge level of 50% – 80% is optimal, which you can read out via the app.

Store the dry bib short with the AEROBAG plugin system in a dry place, out of the reach of children, at 15°C – 20°C, protected from UV light and away from corrosive or aggressive agents.

Carrying the AEROBAG plugin system on aircraft is permitted according to IATA (International Air Transport Association), subject to registration with the respective airline.

Service life & disposal

The service life of the AEROBAG plugin system depends largely on its degree of use.

We generally recommend that the AEROBAG plugin system should be serviced once a year by the manufacturer. Please also contact the manufacturer in order to dispose of the system and return it.

10 Liability

The AEROBAG plugin system is designed to withstand the enormous forces that can occur during falls and incorporates systems manufactured by Minerva-AS GmbH, which are specifically designed, tested, and certified for this purpose.

Warranty cover and liability for the proper functioning of the AEROBAG plugin system vis-à-vis the purchaser is excluded, in particular in the event of improper handling, attempted repairs or part replacement by unauthorised persons as well as operation or connection with third-party components not authorised by AEROBAG. This also applies to unregistered systems in particular.

Unauthorised modifications and improper use

Liability is excluded in the event of installation, maintenance, inspection, or repair carried out by unauthorised or unqualified persons. This includes any attempted modifications, tampering, disassembly, or alteration of the system, as well as the use of non-approved replacement parts or accessories.

The same applies when the system is operated in combination with third-party components that have not been explicitly authorised by AEROBAG, or when the system is used outside the specifications defined in this manual.

10 Liability

Compliance with instructions and safe operation

AEROBAG assumes no liability if the instructions and safety guidelines provided in this manual are not followed, or if the system continues to be used after visible damage, malfunction, impact, or prior deployment. Operation of unregistered systems is likewise excluded from any form of warranty or liability coverage.

The user and operator bear full responsibility for ensuring that the system is used correctly and safely at all times. This includes compliance with all safety instructions, performing regular inspections and maintenance, ensuring proper storage and transport conditions, and immediately taking the system out of service if any defect or damage is suspected or identified.

Limitation of Liability

To the maximum extent permitted by applicable law, AEROBAG shall not be held liable for any indirect, incidental, consequential, or special damages arising from the use or inability to use the system. This includes, but is not limited to, loss of business, operational downtime, loss of profits, loss of data, third-party claims, or any resulting property damage or personal injury caused by improper use.

You are now part of a growing community
riding with AEROBAG.
Thank you for your trust.

We hope you never need us.
But if you do, we'll be there.

AEROBAG Ride protected.



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Enjoy your ride
AEROBAG