



LiTRIC SYSTEM USER MANUAL





REGISTRATION

REGISTER YOUR LITRIC SYSTEM AT [ARCTERYX.COM](https://arcteryx.com) TO RECEIVE UPDATED SAFETY-RELATED INFORMATION. ONCE YOUR LITRIC SYSTEM IS REGISTERED, THE WARRANTY WILL BE EXTENDED FROM 2 YEARS TO 5 YEARS. THE LITRIC BACKPACK IS EXEMPT FROM ANY WARRANTY EXTENSIONS.



LEGEND

A _ LiTRIC fan unit
B _ LiTRIC airbag
C _ ON/OFF button
D _ USB-C port
E _ Electronics cover
F _ LED lights
G _ Air intake zone
H _ Trigger handle
I _ Baseplate
J _ Trigger release cable

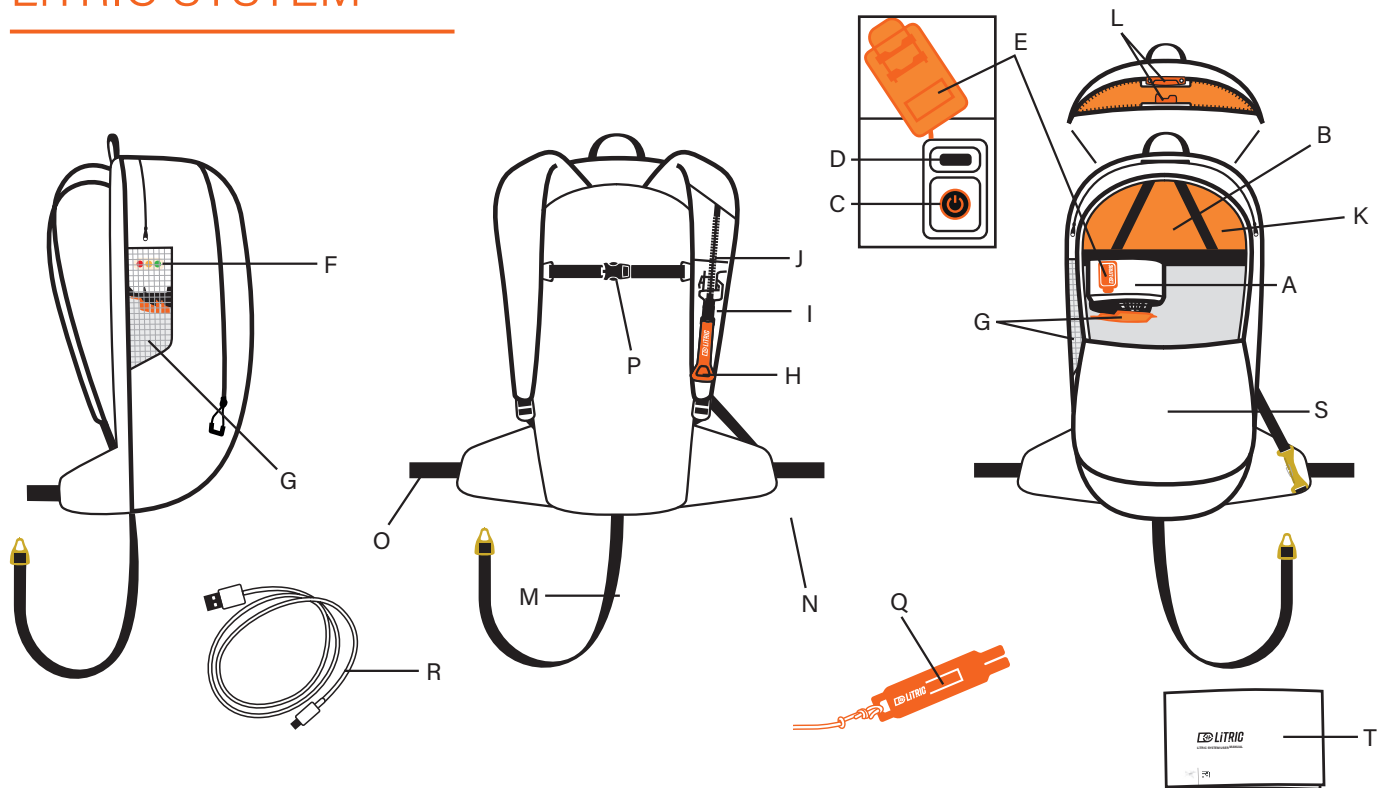
K _ Airbag compartment
L _ Airbag compartment safety latch
M _ Leg strap with carabiner
N _ Leg strap loop
O _ Hipbelt
P _ Sternum strap
Q _ Airbag deflation tool
R _ USB-C cable
S _ LiTRIC backpack
T _ User manual

Definition of terms

LiTRIC System: refers to the airbag system made up of parts A, B, C, D, E, F, G, H, I, J.

LiTRIC Avalanche Airbag: refers to the entire product (parts A through T), made up of the LiTRIC backpack with built-in LiTRIC System.

LiTRIC SYSTEM



CONTENT

Registration	1
1. Warning	5
2. Disclaimer	8
3. Introduction	9
4. Operation	10
5. Maintenance, storage and transport	24
6. Certification and compliance	29
7. Labeling and marks	30
8. WARRANTY	31

1. WARNING

- The LiTRIC Avalanche Airbag does not prevent avalanches from occurring.
- Learn what to do in case you are caught in an avalanche.
- Do not take greater risks than you would if you were not wearing the LiTRIC Avalanche Airbag.
- The LiTRIC Avalanche Airbag is designed to minimize the risk of full burial in the event of an avalanche, but the risk cannot be eliminated entirely and there will be situations where a full burial may happen.
- Before using the LiTRIC Avalanche Airbag, read and understand all the instructions, familiarize yourself with the device, and understand and accept the risks involved with its use.
- Failure to read and understand the instructions could lead to severe injury or death.
- Arc'teryx accepts no liability whatsoever for any direct, indirect or accidental consequences which occur as a result of improper use of this product, except where liability is mandatory by law.
- If a new software version has been installed on your LiTRIC System, go to arcteryx.com to familiarize yourself with the most up-to-date instructions.
- This product contains a lithium-ion battery, therefore:
- **DO NOT USE OR LEAVE THE LiTRIC SYSTEM NEAR A HEAT SOURCE, SUCH AS AN OPEN FLAME OR RADIATOR.**
- **DO NOT LEAVE THE LiTRIC SYSTEM SOMEWHERE HOT (E.G. IN DIRECT SUNLIGHT, OR IN A HOT VEHICLE). THE BATTERY COULD OVERHEAT, EXPLODE, OR CATCH FIRE, AND/OR IT'S PERFORMANCE COULD BE AFFECTED AND IT'S SERVICE LIFE REDUCED.**

- **IF THE LiTRIC SYSTEM EMITS AN ODOR, BECOMES HOT, SEEMS DEFORMED OR ABNORMAL IN ANY WAY DURING USE, CHARGING OR STORAGE, IMMEDIATELY REMOVE THE CHARGING CABLE AND PLACE THE DEVICE IN A SEALABLE CONTAINER, SUCH AS A METAL BOX.**
- Only charge the LiTRIC System battery using the supplied USB-C charging cable. The voltage output of the charger must not exceed 5V. Only use an EC/UL tested charger with Class II protection (double insulated against hazardous voltages). Do not leave the unit unattended while charging.
- The LiTRIC Avalanche Airbag requires careful handling and close inspection to ensure the system is ready for operation before each use.
- Arc'teryx is not responsible for injuries sustained during an avalanche in which a LiTRIC Avalanche Airbag is worn.
- A LiTRIC Avalanche Airbag does NOT replace the need for other avalanche safety equipment (including transceiver, probe, shovel).
- Do not submerge the LiTRIC System in water.
- Do not expose the LiTRIC System to temperatures above 55°C (131°F).
- Do not modify any part of the LiTRIC Avalanche Airbag. Doing so may result in the LiTRIC Avalanche Airbag malfunctioning and will void any warranty or guarantees.
- Do not tamper with the LiTRIC fan system (A), airbag (B) and trigger release cable (J). Opening the system constitutes tampering with conditions as set out by the manufacturer and could impair the safety of the system.

- Maintenance and full system checks can only be carried out by the manufacturer. For servicing go to arcteryx.com/help/micon-litric
- Do not use this avalanche pack if you have not charged the battery or have not maintained it in accordance with these instructions.
- The avalanche pack does not deploy automatically. You must pull the trigger handle to release.
- This product is intended for emergency use only, and you should still take all precautions to avoid an avalanche.
- With appropriate supervision and instruction this appliance can be used by children aged 8 years and older, as well as persons with reduced physical, sensory, or mental capabilities or a lack of experience. Instruction and supervision must include appropriate and safe use of the appliance and a clear understanding of the hazards involved.
- Children should not be left unsupervised with the appliance. Cleaning and user maintenance should not be done by children without appropriate supervision.

Operating elevation: 0m to 4808m

2. DISCLAIMER

LiTRIC Avalanche Airbags are designed to withstand the enormous forces generated by avalanches. For this reason, LiTRIC Avalanche Airbags are TÜV/CE (DIN EN 16716) certified (see point 6). Arc'teryx does not warrant or assume liability for the function of the LiTRIC Avalanche Airbag over and above those features certified, except where mandatory liability is stipulated by law. This applies, in particular, in cases of improper handling, attempted repairs or parts replaced by unauthorized persons, or use of or connection with third-party components not authorized by Arc'teryx.

3. INTRODUCTION

The LiTRIC System is an electric fan-based system that allows for a lightweight product that can be deployed multiple times from one single battery charge.

Supercapacitors provide the energy for the airbag release. Once the airbag is deployed, the supercapacitors are recharged by a small built-in lithium-ion battery, which allows the LiTRIC System to be ready for deployment again after just a short pause.

4. OPERATION

4.1. CHARGING

Carefully lift the electronics cover (E) to access the USB-C port (D). Use the supplied USB-C cable (R) to charge the device via a USB power source (E.G. a laptop) or with a USB charger (see point 1). The LED lights (F) indicate the charging status (see point 4.3).

Remove the USB-C cable as soon as charging is complete and carefully close the electronics cover again to prevent moisture or dirt from penetrating.

PLEASE NOTE:

You must charge the battery before first use.

ATTENTION

- The trigger handle should be locked (see point 4.4.1) while charging. The airbag may deploy if the trigger handle is pulled when the LED lights are on, even during charging.
- Do not leave the USB-C cable plugged in while the LiTRIC Avalanche Airbag is in use in the backcountry.

4.2. ON/OFF FUNCTION

Carefully lift the electronics cover (E). To turn the system on, press the ON/OFF button (C) for 2+ seconds. All three LED lights (F) will light up and there will be a rising series of beeps when powering on.

Each time the LiTRIC System is switched on it will perform an automatic self-test. Once the system is switched on, the supercapacitors are charged by the lithium-ion battery to be ready for deployment. The charging time depends on the current charge status of the system. If the system has recently been charged, the charging time can take a few seconds up to a few minutes.

If the LiTRIC System was recently deployed, the charging time will take approximately 25 minutes.

Once the system is charged and ready for deployment, it will automatically run a brief motor test and the LED lights will indicate the charge status (see point 4.3). The LiTRIC system is now ready to deploy.

To turn it off, press the ON/OFF button again for 2+ seconds. All three LED lights will light up again and a decreasing series of beeps will be heard when powering off.








































ATTENTION

Always carefully close the electronics cover again to prevent moisture or dirt from penetrating.

4.3. LED-INFORMATION

The LED lights(F) are clearly visible from the inside and outside of the backpack.

LED SIGNAL	MEANING
→    2,5 s     2,5 s     →	Charging
→  2,5 s   2,5 s   →	System is charged enough for a minimum of two deployments.
→   2,5 s    2,5 s   →	Charging required. The LiTRIC System will hold enough charge for one deployment for at least 8 hours.
→  2,5 s   2,5 s   →	Charging required. The LiTRIC System could switch off at any time. Deployment is no longer assured.
 	System is fully charged and switched OFF.
→  1 s   1 s   →	System is fully charged and switched ON.

LED SIGNAL	MEANING
	<p>ATTENTION SYSTEM ERROR. TAKE THE FOLLOWING ACTIONS:</p> <ul style="list-style-type: none"> ▪ Turn the LiTRIC System OFF and then ON again. ▪ If the red light remains on, charge the LiTRIC System., ▪ If the red light still remains on, send your LiTRIC Avalanche Airbag in for a service inspection (see point 5.3).
	<p>The maximum number of 50 deployments has been reached. The LiTRIC Avalanche Airbag should be sent in for a service inspection (see point 5.3).</p>

Changes in operating status are accompanied by beeps:

- Rising series of beeps: LiTRIC System is ON.
- Falling series of beeps: LiTRIC System is OFF.
- 3-second continuous beep: LiTRIC System needs to be charged. The LiTRIC System could switch off at any time. Deployment is no longer assured.
- 10-second continuous beep: LiTRIC System is shutting down because the battery is low.

4.4. BACKCOUNTRY USE

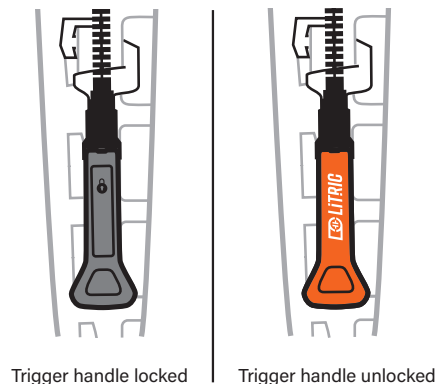
When using the LiTRIC System in the backcountry it must be switched ON and be sufficiently charged (see points 4.2 and 4.3).

4.4.1. Operating the trigger handle

The LiTRIC fan system is activated by tugging forcefully on the unlocked trigger handle (H) which is located on the backpack shoulder strap. The trigger handle is designed for use while wearing gloves and for both left and right-handed people.

The trigger handle can be unlocked or locked by rotating it 180°.

- When the orange side is facing the front, the trigger handle is unlocked and ready for deployment.
- When the black side with the lock symbol is facing the front with the trigger handle latched in place, the trigger handle is locked.



ATTENTION

In places where deployment of the airbag could potentially be dangerous to you or others around you (such as in a vehicle, chairlift, crowd, on a ridge, etc.), make sure the trigger handle cannot be pulled accidentally, thereby deploying the LiTRIC Avalanche Airbag. Place the trigger handle in the locked position.

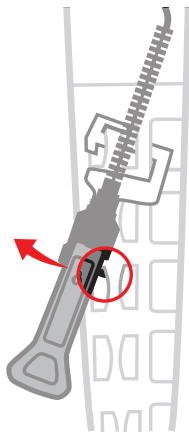
ATTENTION

Before going into the backcountry or avalanche terrain, always unlock the trigger handle to enable deployment of the LiTRIC System.

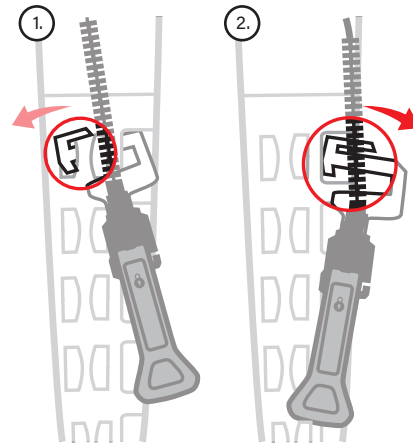
4.4.2. Adjusting the height of the trigger handle

The trigger handle (H) can be installed at three different heights on the shoulder strap to better suit the individual.

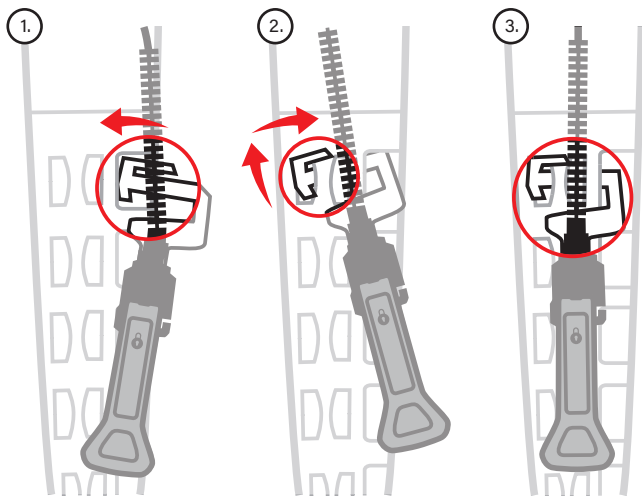
To change trigger handle position:
Switch the LiTRIC System OFF (see point 4.2)



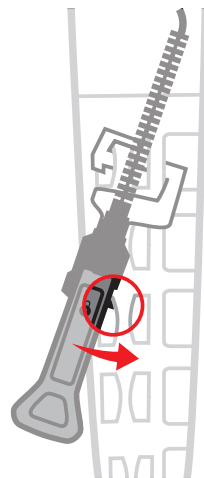
1. Unhook the lower clasp of the handle baseplate (I)



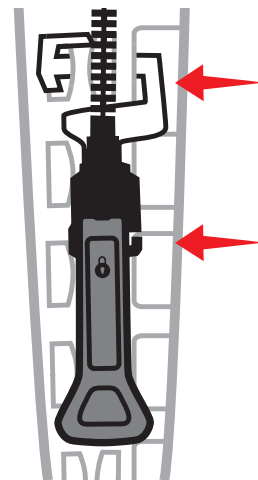
2. Unhook the upper clasp of handle baseplate



3. Determine the correct height and thread the upper clasp of the handle baseplate back through the baseplate



4. Finally, thread through the lower clasp



5. Baseplate in position

ATTENTION

The baseplate on the trigger handle must be hooked onto the shoulder strap by both clasps (top and bottom).

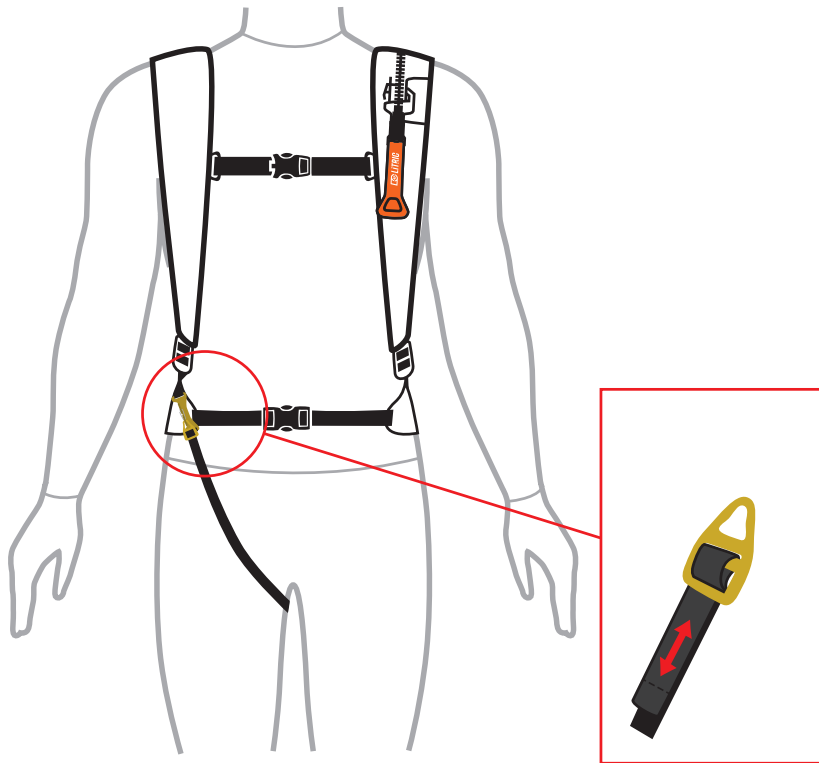
4.4.3. Using the leg strap

The force exerted during an avalanche can rip a backpack with deployed airbag from your back if you do not use the leg strap (**M**). Adjust the length of the leg strap loop on the hipbelt (**O**) so that it fits snugly against your body without impairing your freedom of movement.



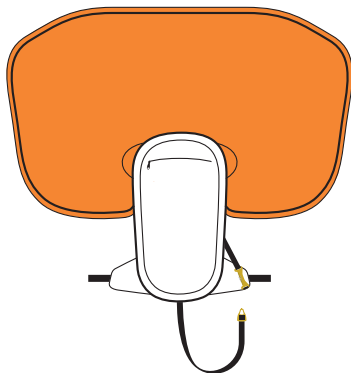
ATTENTION

The leg strap must be worn properly to ensure the LiTRIC Avalanche Airbag works as designed. The leg strap carabiner must be clipped to the dedicated leg strap loop (**N**) on the hipbelt (**O**).



4.4.4. Wearing the LiTRIC backpack

Put on the LiTRIC backpack (**S**) and pull the shoulder straps until they are snug. Then fasten the hipbelt and sternum strap buckles (**O**, **P**), pull them tight and double-check that they are securely fastened. Clip on the leg strap (see point 4.4.3.).



Opening area of the LiTRIC airbag

ATTENTION

- Electronic or magnetic objects can interfere with avalanche transceivers. To minimize the chances of this happening, always wear your transceiver on the front of your torso, leaving plenty of space between your avalanche transceiver and the LiTRIC System.
- Pack the LiTRIC backpack in such a way that no sharp or pointy items can damage the LiTRIC fan (**A**), the LiTRIC airbag (**B**) or the airbag compartment (**K**).
- When strapping on ice axes, ice tools or ski poles, make sure these have a tip protector or sheath in place.
- The air intake zone (**G**) for the LiTRIC Avalanche Airbag must never be obstructed; air must be able to freely enter the system at all times. Do not pack any items, such as a jacket, into or onto the LiTRIC backpack in such a way that it covers the air intake zone
- Do not attach any items to the LiTRIC backpack in such a way that they block the airbag compartment, otherwise they could interfere with the deployment of the airbag.
- Do not attach skis to the sides of the LiTRIC backpack. Skis strapped to the sides could interfere with the inflation of the LiTRIC airbag.

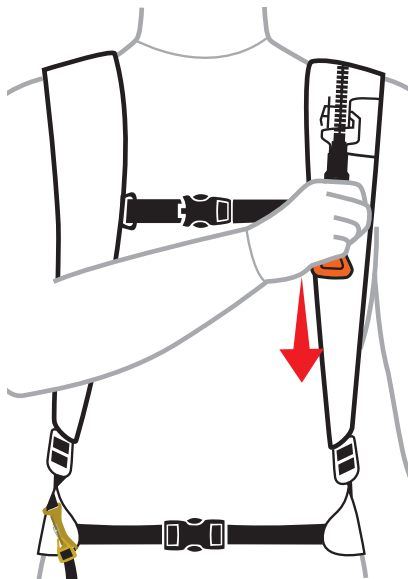
4.5. DEPLOYING THE LiTRIC AIRBAG

4.5.1. Deploying the LiTRIC Avalanche Airbag

If an avalanche is triggered, immediately deploy the LiTRIC Avalanche Airbag by pulling as hard as you can on the trigger handle (H) in a downward tugging motion. The LiTRIC airbag will then automatically inflate. The inflated LiTRIC airbag will not be a hindrance in any avalanche escape or evasion attempts.

PLEASE NOTE

Before using the LiTRIC Avalanche Airbag in an avalanche situation, it is important to regularly practice deploying the airbag.



Deployment

ATTENTION

The LiTRIC System must be activated by hand. The LiTRIC System must be sufficiently charged for it to deploy correctly.

4.5.2. What to do in case of an avalanche

Familiarize yourself with the correct procedures in the event of an avalanche. In principle, the following general advice applies: In an avalanche, always try to escape and get to safety as fast as possible. Leave the airbag inflated and on your body until all potential danger from the avalanche has passed and you are safely out of the danger zone.



ATTENTION

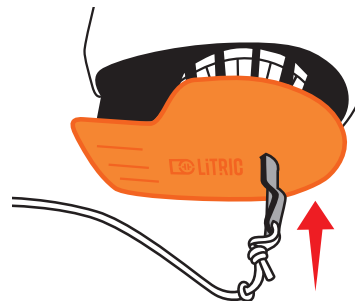
The LiTRIC Avalanche Airbag must be sent in for a service inspection (see point 5.3) after it has been deployed and inflated in an avalanche.

4.6. AFTER DEPLOYMENT

4.6.1. Deflation

In order to prepare the LiTRIC Avalanche Airbag for another deployment, you must first deflate the LiTRIC airbag (**B**) using the airbag deflation tool (**Q**).

Push the airbag deflation tool into the special air release valve on the LiTRIC fan (**A**). Now the air can escape the airbag. Leave the airbag deflation tool in the fan unit until the LiTRIC airbag is packed away, and then remove it.



Deflation

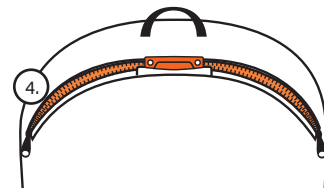
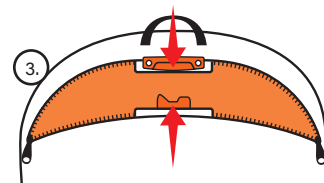
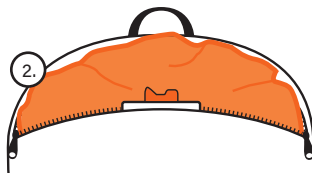
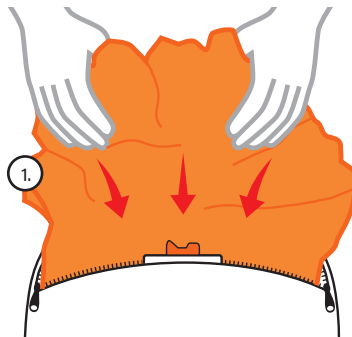


ATTENTION

Use only the airbag deflation tool (**Q**) to deflate the LiTRIC airbag. Never put any other items or tools into the LiTRIC System air release valve.

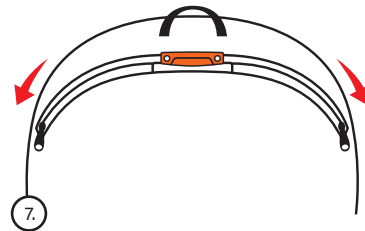
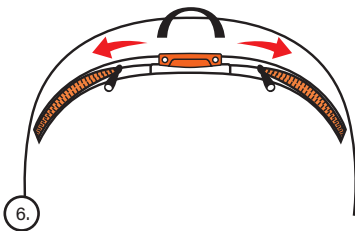
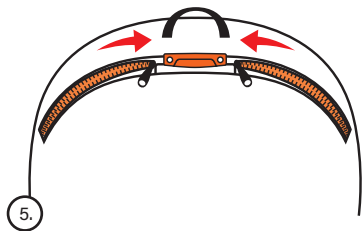
4.6.2. Repacking the airbag

- Lock the trigger handle (H) (see point 4.4.1).
- Evenly stuff the LiTRIC airbag (B) into the airbag compartment (K) (steps 1 and 2).
- Squeeze any remaining air from the airbag.
- Close the airbag compartment safety latch (L) by pressing it together (steps 3 and 4).



ATTENTION

Make sure the airbag compartment safety latch (L) engages correctly.



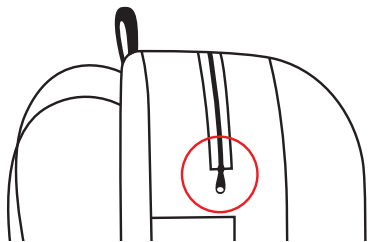
ATTENTION

- Pull both zipper sliders, one after the other, upwards until they butt up to the airbag compartment safety latch (step 5).
- Pull both the zipper sliders back down to the bottom (steps 6 and 7).

- Do not twist the airbag while packing it away.
- Do not roll the airbag while packing it away.
- Do not fold the airbag while packing it away.
- Make sure the airbag does not get caught in the zipper or safety latch.
- Make sure the airbag compartment is

not obstructed.

- Make sure the airbag is completely dry before packing it away for prolonged periods.
- Do not use the airbag compartment to store anything other than the airbag.
- The airbag deflation tool must be removed from the LiTRIC fan unit before use.



Zipper sliders correctly positioned at the bottom.

ATTENTION

- Check that the teeth on both zippers have engaged properly and are sealed.
- Both zipper sliders must be positioned at their lowest position and not at the top, otherwise the airbag will not deploy fully.

4.6.3. Secondary deployment option

Supercapacitors in the LiTRIC Avalanche Airbag power the airbag's deployment. Once the airbag is deployed, the built-in lithium-ion battery automatically and instantly begins to recharge the supercapacitors, so they are ready for deployment again. In order for this to occur, the LiTRIC airbag must be correctly repacked, the LiTRIC System must be switched ON, and the lithium-ion battery must have

sufficient charge (see point 4.3). Charging time is approximately 25 minutes.

Once the system is charged and ready for one deployment, it will automatically run a brief motor test and the LED lights will indicate the system's charge status. The LiTRIC airbag system is then ready to deploy.

5. MAINTENANCE, STORAGE AND TRANSPORT

5.1. YEARLY INSPECTION

The LiTRIC System should be inspected at least once per year.

- Deploy the airbag at least once a year for testing and training purposes.
- In doing so, check that the airbag remains fully inflated for a minimum of three minutes.
- Inspect the airbag for any damage and then repack properly.

- Before storing it, ensure that the entire LiTRIC System is completely dry.
- Check the backpack regularly for any damage.



ATTENTION

If the LiTRIC Avalanche Airbag shows any signs of damage send it back to the manufacturer for a full inspection (see point 5.3).

5.2. SERVICE FOLLOWING DEPLOYMENT IN AN AVALANCHE

Deployment of the airbag in an avalanche puts a great deal of stress on the material and can damage the LiTRIC Avalanche Airbag. It is crucial that a service inspection be carried out following an avalanche deployment. Send the LiTRIC Avalanche Airbag in to the manufacturer for inspection following any live deployment in an avalanche (see point 5.3).

5.3. SERVICE

- For service information visit arcteryx.com/help/micon-litric.
- The LiTRIC Avalanche Airbag is designed for up to 50 deployments (see LED indicators point 4.3). An inspection should be carried out by the manufacturer to certify its suitability for any further deployments. If no service inspection is carried out by the manufacturer after 50 deployments, the LiTRIC Avalanche Airbag should be retired (see also point 5.5).
- A service inspection must be carried out no later than 5 years after the date of purchase.
- The service inspection, which is subject to a charge, includes inspection of the entire LiTRIC Avalanche Airbag.

5.4. STORAGE

When being stored for longer periods, during the summer months for instance, the LiTRIC System must be set to 'storage mode' to ensure the long-term durability of the lithium-ion battery.

STORAGE MODE

- Connect the USB-C cable (**R**) to a power source via the USB-C port (**D**).
- Fully charge the system (see point 4.1).
- Disconnect the USB-C cable from the port and press the ON/OFF button immediately (within one second). Hold down the ON/OFF button for at least one second.
- All three LED lights (**F**) will begin to flash until the optimum charge level has been reached for long-term storage. This process may take several days. The LiTRIC Avalanche Airbag is now ready for storage. And the system will automatically switch itself off once the optimum charge level has been reached.

ATTENTION

Store the LiTRIC System in a dry area, out of reach of children, and at room temperature (approx. 20°C/68°F). Ensure the whole LiTRIC System is completely dry before storage.

PLEASE NOTE

- Charge the system again before use (see point 4.1).
- The system should be fully recharged no later than 10 months after going into storage.

5.5. SERVICE LIFE

Even if the recommended maintenance and service intervals (see point 5.2 and 5.3) and yearly inspections are observed and it is handled correctly, the LiTRIC System has a maximum service life of 10 years from the date of manufacture or 50 deployments. The service life cannot be accurately determined, because it depends on various factors, such as how frequently it is used, how it is handled, climatic conditions, etc.

The following table is a guideline for estimating potential service life:

USAGE FREQUENCY IN DAYS		MAX. SERVICE LIFE IN SEASONS
Extremely frequent	120+ days/season	2
Very frequent	91 to 120 days/season	3
Frequent	41 to 90 days/season	5
Occasional	Up to 40 days/season	10

5.6. CLEANING

Only use water to clean the LiTRIC Avalanche Airbag. Never use detergents or cleaning solutions. Once cleaned, the LiTRIC Avalanche Airbag must fully dry at room temperature before its next use. Otherwise, the system could become iced up.

5.7. TRANSPORT AND TRAVEL

- Before boarding any type of transportation (E.G. bus, plane, helicopter), always make sure the LiTRIC System is switched OFF (see point 4.2) and the trigger handle (H) is locked (see point 4.4.1).
- No special documents are required to travel with the LiTRIC Avalanche Airbag. With a battery power of 7.4 Wh, the LiTRIC's lithium-ion battery is subject to the same standard conditions for travel as, for example, a cell phone or other small electronic device. The LiTRIC supercapacitors are passive elements and are therefore not subject to travel restrictions.
- For air traffic passengers, portable electronic devices are allowed as long as the following criteria are met:
 - Nominal capacity is $\leq 100\text{Wh}$
 - There are no more than 15 devices per person
 - The device is for that person's personal use

PLEASE NOTE

Check current flight regulations before travel.

5.8.

DISPOSAL



- Never dispose of electronic devices in your regular household waste.
- Always dispose of electronic devices at designated recycling facilities.
- The LiTRIC System can be returned to the retailer for free-of-charge disposal.
- Follow the applicable disposal laws and regulations in your country.

5.9.

TECHNICAL SPECIFICATIONS

- When deployed, the LiTRIC System will top up the airbag twice, at one-minute intervals.
- LiTRIC airbag volume: 150 liters
- LiTRIC System weight: approx. 1,080g
- Allowable operating temperature: -30°C to 45°C (-22°F to 113°F)
- Optimum storage temperature (battery): 20°C (68°F)
- Allowable charging temperature: -20°C to 45°C (-4°F to 113°F)
- Battery specification: Lithium-ion battery nominal capacity: 3.7V, 2000mAh, 7.4Wh

6. CERTIFICATION AND COMPLIANCE

MANUFACTURER

Arc'teryx Equipment
#110 - 2220 Dollarton Hwy
North Vancouver, BC
V7H 1A8 | Canada

MODEL

LiTRIC Avalanche Airbag System
Product standard: EN 16716:2017

The LiTRIC Avalanche Airbag System is certified by TÜV Süd Product Service GmbH according to PPE regulation (EU) 2016/ 425 as well as the CE guidelines.

TÜV Süd Product Service GmbH,
Daimlerstr 11, D-85748 Garching
Test station number 0123

The full EU Conformity Declaration is available at arcteryx.com/help/eu-conformity

7. LABELING AND MARKS

LiTRIC Airbag system model name



Users must carefully read the instruction manual before using the product.



Date of manufacture: Year - month

Individual serial number

2022 - 123 - 123



The CE mark ensures compliance with the Personal Protective Equipment Directive (EU) 2016/425.

EN 16716 The LiTRIC Avalanche Airbag conforms to EN 16716:2017 standards for 'Mountaineering equipment—avalanche airbag systems—safety requirements and test methods.'



A garbage can that's crossed out is the symbol to indicate that electronic devices should not be disposed of with regular household waste.

8. WARRANTY

The warranty period for manufacturing and material defects of the LiTRIC System is two years from the date of purchase.

Register your LiTRIC SYSTEM at arcteryx.com, so we can update you with safety-related information. Once you've registered, we'll extend the warranty for your LiTRIC System from two years to five years. The LiTRIC backpack is exempt from any warranty extensions.

The warranty does not cover the battery or charging cable or defects caused by improper handling or regular wear and tear. For products that do not exhibit any defects, inspection costs are chargeable. Shipping costs are to be borne by the owner. The warranty does not impact any statutory warranty claims.

EU IMPORTER

Amer Sports,
Europe Services
Im Hasfeld 2
Überherrn, Germany
66802

