

REMOVABLE AIRBAG SYSTEM 3.0

User Manual



- DE Benutzerhandbuch
- EN User Manual
- FR Manuel de l'utilisateur
- IT Istruzioni per l'uso
- ES Instrucciones de uso
- NO Brukerhåndbok
- SE Användarhandbok
- JA ユーザーマニュアル



MAMMUT

AIRBAG

TECHNOLOGY 3.0

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1. Introduction and operation

Thank you for purchasing a Mammut avalanche airbag. Please read this manual carefully and note the warnings and guidelines.

If you are caught up in an avalanche, a Mammut avalanche airbag increases your chance of staying on the surface. However, an avalanche airbag does not provide any guarantee of survival, as its effectiveness in the avalanche depends to a great extent on the volume of snow, the density of the snow and, in particular, the nature of the terrain. You should therefore never take the extra risk. An avalanche is always life-threatening, regardless of the equipment used. Like a Barryvox®, probe, shovel and first aid set, an avalanche airbag should be part of every ski tourer's or freerider's standard safety equipment. Sound training in risk management and familiarization with your safety equipment are also essential requirements.



2. Warning

Anyone using Mammut equipment is personally responsible for learning the proper use and technique. Every user assumes any risks and accepts responsibility for any damages or injuries of any kind that result

from the use of Mammut products. Neither the manufacturer nor the retailer accept any liability in the event of misuse and improper use and/or handling. These guidelines are intended to help you use the product correctly. Since it is not possible to list all incorrect usages and possible errors, these instructions can never replace your own knowledge, training, experience and personal responsibility.

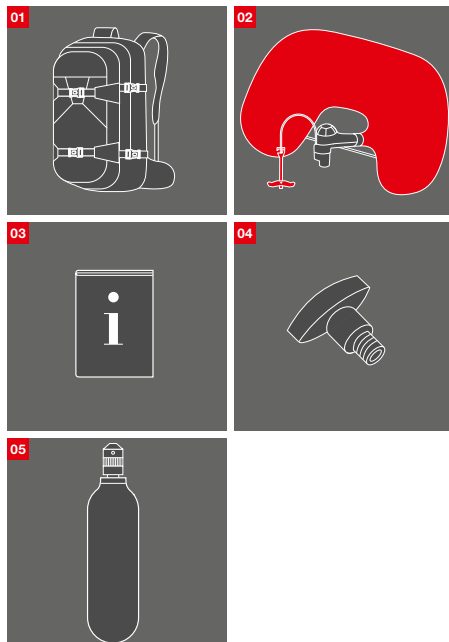
3. Operation

The avalanche airbag uses the physical law of inverse segregation (sorting effect). This means that in an equally moving mass of particles (e.g. snow), the smaller particles gravitate to the bottom while the larger ones rise to the surface. Pulling the deployment handle increases the wearer's volume, significantly boosting this effect. Consequently, the avalanche airbag can actively help prevent burial or partial burial and, in an ideal situation, allow self-rescue or rapid location.

4. Parts needed for operation

- 01 Backpack (if you have bought the airbag system by itself, you must obtain the matching backpack separately)
- 02 Airbag System
- 03 Handbook
- 04 Trigger Test Tool (for test deployment without cartridge)
- 05 Pressure cartridge (the necessary system cartridge is not included and must be ordered separately)





5. Instructions

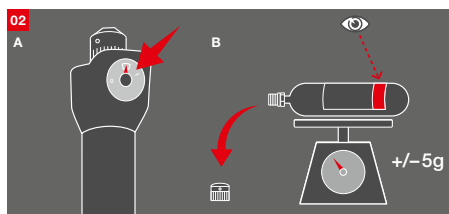
5.1 Preparing, putting on and deploying the airbag

01 Check that the airbag system has been installed correctly before entering terrain with a potential avalanche risk. Follow the instructions in *Section 5.3*.

02 Always check the filling pressure of the cartridge before use.

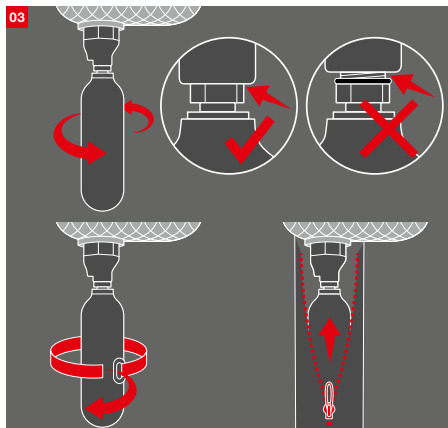
A Cartridge with pressure gauge: At a room temperature of 20 °C/68 °F, the arrow must be in the green area.

B Cartridge without pressure gauge: the actual weight of the cartridge (without protective cap) must correspond to the weight indicated on the cartridge (+/-5 g).



03 Screw the cartridge all the way into the mechanism, fasten in the cartridge pocket using velcro and close the pocket. Make sure there are no foreign objects in the pocket. Mammut airbags may only be used with Mammut or Snowpulse cartridges.

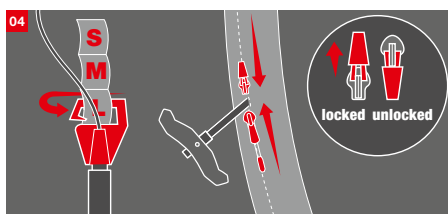
CAUTION: Screw the cartridge in completely (the black rubber seal must not be visible). The cartridge must be secured using velcro.



04 Adjust the height of the deployment handle on the left shoulder strap. There are three different settings (S/M/L). The grip should ideally be at chest height. The strap should be properly attached to the hook.

Close the upper zipper until it is just below the attachment. Use the lower zipper to install and remove the handle.

You can lock the zipper by folding the handle up.

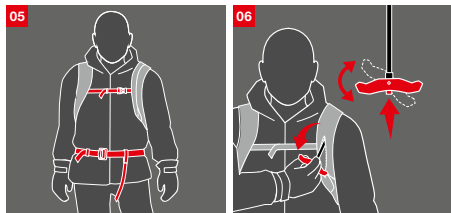


05 To put on the avalanche airbag correctly, thread the hip belt through the leg strap; close the hip belt (the hip belt should sit approximately on the hip bone); tighten the shoulder straps; tighten the chest strap. The length of the leg loop can also be adjusted. The leg loop should also fit tightly.

06 Before entering areas with an avalanche risk, remove the deployment handle from the pocket and turn into a T position. To stow the deployment handle, press the button under the grip and twist it into a vertical position. Place the grip in the shoulder strap and close the zipper.

07 If you become caught in an avalanche, deploy the airbag immediately. It is better to use it once too often than once too little. Pull the deployment handle hard and decisively.

The airbag will automatically fill in approx. three seconds. You will hear a relatively loud noise as the airbag fills.



06 Spread the airbag out flat and fold it according to the illustration (you will also find video instructions on folding the airbag on our website) mammut.com/airbags

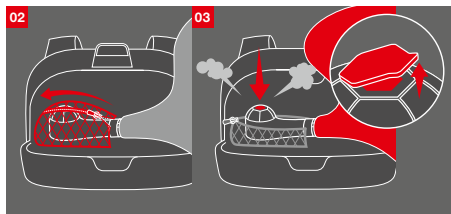
CAUTION: The airbag should never be rolled up before packing.

5.2 Further use (folding)

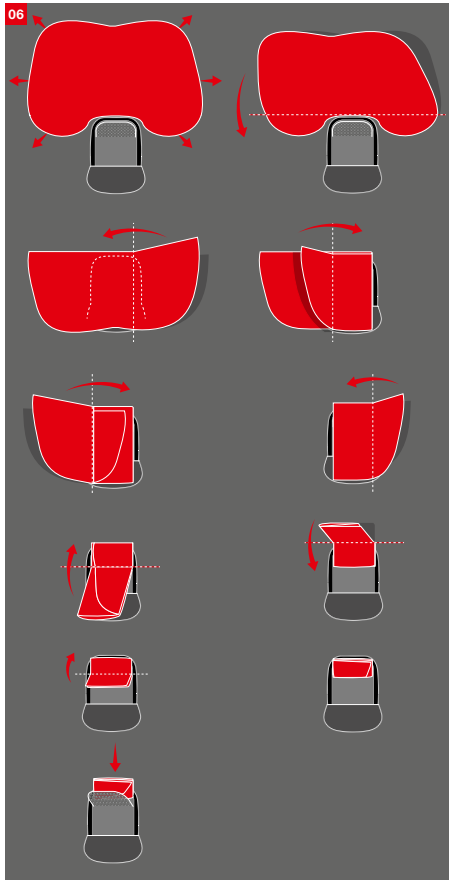
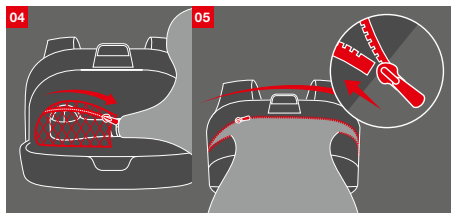
The avalanche airbag can be reused after deployment. However, after deployment in an avalanche, it must be checked by Mammut Customer Service. This is the only way to guarantee smooth deployment. If you have used your airbag in an avalanche, please contact your Mammut retailer. We strongly advise against using your airbag without having it checked first.

After a test deployment, however, you can prepare your system again yourself using the following procedure:

- 01** Unscrew the cartridge and remove it from the system
- 02** Open the airbag system pocket zipper
- 03** Remove the protective cap, press the deflation button and press the air out of the airbag (the less air is in the airbag, the simpler it is to fold)

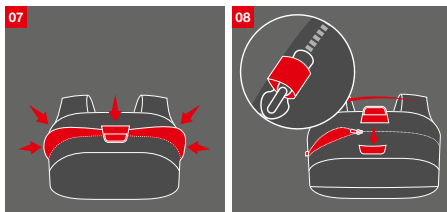


- 04** Close the airbag system pocket zipper
- 05** Move the airbag opening zippers from the left to the right



- 07** Once you have finished folding, close the velcro fastening over the airbag opening to hold the airbag together
- 08** Slowly close the airbag opening zipper and attach to the loop

CAUTION: Take care not to damage the airbag when closing the zipper.

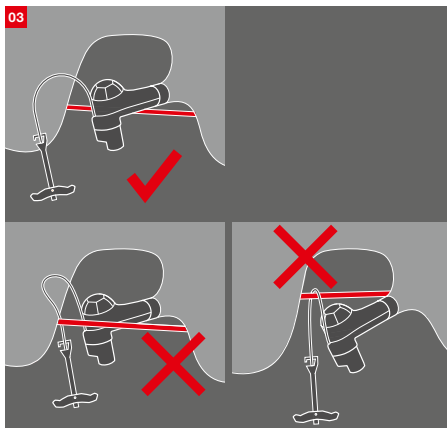


- 09** Use a new cartridge or refill the cartridge and check the cartridge pressure (see *Section 5.1*)
10 Screw in the cartridge and secure the cartridge pocket (see *Section 5.1*)

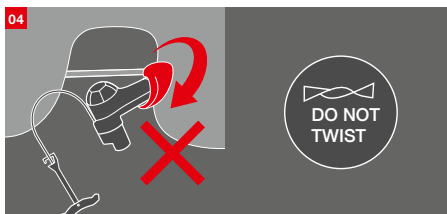
5.3 Installing the airbag system

The Removable Airbag System 3.0 can be installed in various compatible backpacks. Please note that the Removable Airbag System 3.0 can only be installed in Removable Airbag System 3.0 backpacks.

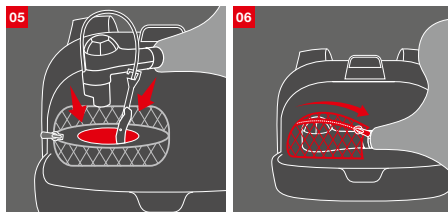
- 01** Open the airbag pocket (open the zipper from the center to the right)
02 Spread the airbag out flat. Remove all the air from the airbag, if necessary (see *Section 5.2*).
03 Before installation, the airbag system should lie over the gray strap (red in the illustration).



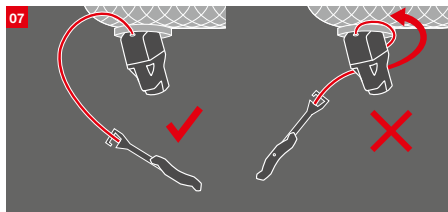
- 04** Make sure the airbag has not been attached the wrong way round.



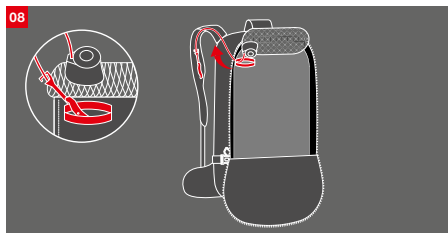
- 05** Thread the deployment handle and airbag system through the hole in the airbag system pocket
06 Close the airbag system pocket



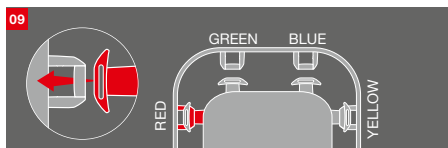
- 07** The cable must not be wound around the airbag system.



- 08** Place the deployment handle into the left shoulder strap



- 09** Thread the four colored airbag buckles through the appropriate loops (from bottom to top)



- 10** Fold the airbag and pack it as described in *Section 5.2*
11 Attach the deployment handle as described in *Section 5.1*

5.4 Removing the airbag system

The Removable Airbag System 3.0 can be removed from the backpack in just a few steps (see *illustration in Section 5.3*).

- 01** Unscrew the cartridge
02 Open the airbag pocket
03 Open the airbag system pocket
04 Loosen the four airbag buckles
05 Loosen the deployment handle in the shoulder strap and feed it into the main compartment

- 06** Thread the deployment handle and airbag system through the hole in the airbag system pocket

5.5 Training deployment

Training with your avalanche airbag is necessary in order to become familiar with your system and to be able to act quickly and intuitively in an emergency. In particular, you should practice deploying your avalanche airbag in order to realize how hard you need to pull on the deployment handle. In order to avoid refolding your avalanche airbag after every practice, you can also perform a dry deployment without a pressure cartridge. The Trigger Test Tool allows you to perform such a dry deployment simply. We recommend at least one dry deployment before the winter season begins.

Using the trigger test tool:

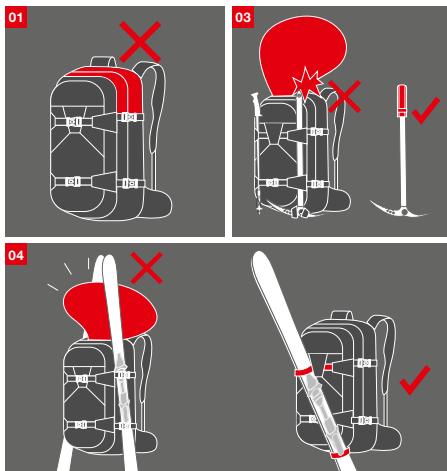
- 01** Screw the Trigger Test Tool all the way into the deployment mechanism. Caution: the Trigger Test Tool must not be overtightened.
- 02** Put the backpack on (see Section 5.1). In order to make the deployment as realistic as possible, we recommend wearing your skiing clothes during the dry deployment. Deploying the airbag wearing gloves is particularly good practice.
- 03** Deploy your avalanche airbag as described in Section 5.1.
- 04** Unscrew the Trigger Test Tool from the deployment mechanism.



5.6 Attaching equipment to the backpack

Our backpack models offer a number of options for attaching a variety of different equipment to your backpack. The following points should be considered::

- 01** It is important to ensure that any attachment of additional equipment does not inhibit the deployment of the airbag. In other words: do not block the airbag openings (e.g. attaching a rope to the backpack).
- 02** Your shovel and probe can be placed in your backpack. Most backpacks have a separate compartment for safety equipment
- 03** Your ice ax can be attached to the outside of your backpack. Always use a protective ax cap, such as the Mammut Ice Spike Protection. This prevents the tip of the ax damaging the avalanche airbag in an emergency. The Ice Spike Protection is suitable for most popular mountain tour ice axes.
- 04** We recommend that you always attach your skis diagonally across your backpack. Although fixing your skis in a A-shape is possible, we only advise doing so in safe terrain. Fixing your skis in an A-shape can impair the inflation of the airbag.



6 Cartridges

6.1 General

The pressure cartridges are the airbag system's energy storage system. We stock a number of cartridges that are compatible with the Removable Airbag System 3.0. All cartridges that were compatible with the Inflation System 2.0 (from 2011/2012) are compatible with the new Airbag System 3.0. One cartridge allows only one deployment. After deployment the empty cartridge must be refilled.

6.2 Types and refilling

Only use Mammut or Snowpulse cartridge with Mammut airbags:

Carbon cartridges

These are the lightest cartridges we stock and must be replaced by a Mammut retailer after deployment. Many Mammut retailers offer a good price for replacing old cartridges with new ones. Not available in the USA and Canada.

Steel cartridges

These cartridges are slightly heavier and must be replaced by a Mammut dealer after deployment. Many Mammut retailers offer a good price for replacing old cartridges with new ones. Not available in the USA and Canada.

Aluminum cartridges

Aluminum cartridges are mainly used in the USA and Canada. Customers can refill the cartridges themselves. Please read our handbook on refilling cartridges yourself and the list of official filling stations for 207 bar aluminum cartridges:

mammut.com/cartridge-refill

6.3 Further information

- Cartridges must be refilled or replaced after use. Filling instructions: mammut.com/airbags
- The filling pressure must always be checked before use
- Only use Mammut or Snowpulse cartridge with Mammut airbags
- Cartridges must never be exposed to excessive heat (direct sunlight, oven, etc.)
- Cartridges may only be used within the permitted temperature range (-30 to +40 °C)
- Cartridges must not be damaged. Damaged cartridges must be replaced
- The cartridge must be screwed all the way into the airbag system (the black rubber seal must not be visible)
- The cartridge must be secured in the backpack using velcro

7. Flying with an avalanche airbag

In general, it is possible to transport Mammut avalanche airbags by air (please note there is a special regulation for the USA). The pressure cartridges used in avalanche airbags are classed as hazardous goods. Special regulations therefore apply if you wish to carry them with you on a flight.

You can always find up-to-date information on the subject of flying with cartridges here:

mammut.com/airbags-travel

8. Cartridge rental stations

Our numerous cartridge rental stations offer a simple way to travel with your avalanche airbag. Simply rent your avalanche airbag cartridge locally.

A list of cartridge rental stations can be found here:

mammut.com/airbags-travel

9. Care, maintenance and further information

9.1 Cleaning

Only clean your Mammut avalanche airbag with water. Do not use solvents. After cleaning, the airbag must be completely dry before reuse. Dry the airbag in the open air. Spread the airbag out flat. Do not dry in direct sunlight or using a dryer or heater.

9.2 Maintenance and disposal

We recommend regular maintenance of your avalanche airbag.

Check your equipment for signs of damage and wear before every use.

The following points should be noted:

- 01** Ensure that the airbag system is correctly installed (*Section 5.3*) and folded (*Section 5.2*).
- 02** Make sure that your cartridge has the correct pressure and is completely screwed in. (The black rubber seal must not be visible) (*Section 5.1*).
- 03** Perform at least one training deployment per season. The training deployment can also be performed with an empty cartridge or the Trigger Test Tool. If the deployment is successful, you will hear a clear "click" (*Section 5.6*).
- 04** Check the airbag for holes or tears.

05 If the airbag is wet, spread it out flat and leave it to dry.

06 Check the airbag system for damage (cracks in the housing, dents, threading, etc.).

07 Check your backpack, shoulder straps and hip belt for holes, tears and damaged seams.

If you discover signs of damage or have other doubts about reliability, please contact Customer Service. Damaged equipment must either be properly disposed of or repaired by our customer services before use. It is forbidden to make any repairs and changes to the product, which are not explicitly described in this manual, by yourself.

9.3 Maintenance after use in an avalanche

Any use in an avalanche can damage the avalanche airbag because it is subject to enormous forces. Maintenance of the system after use in an avalanche is therefore essential. This maintenance must be performed by Mammut Customer Service. Please contact your retailer of Mammut Customer Service to check or maintain your airbag.

9.4 Storage

Store your Mammut airbag in a cool, dry place.

Remove the cartridge if you intend to store the airbag for a long time. Store your cartridges in a cool, dry place. Use the cartridge cover and original packaging to store cartridges.

9.5 Durability

Given optimum storage and rare use the product should be replaced after a maximum of 10 years (from date of manufacture) or after a maximum of 40 deployments (with or without cartridge). The product's service life depends on many factors, such as how often it is used, where it is used, climatic influences, etc.

The following table provides guidelines concerning the durability:

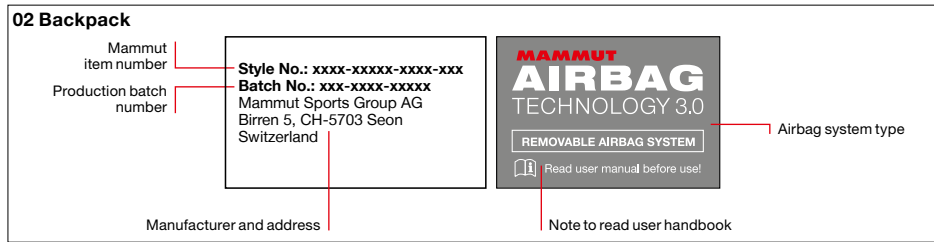
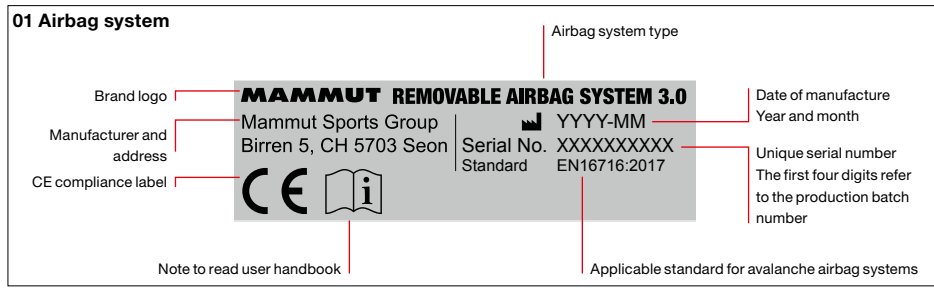
Frequency of use in days of use per year (given optimum storage)	Approximate lifetime
Rare use Up to 10 times per year	Up to 10 years
Occasional use Between 10 and 40 times per year	5-7 years
Regular use Between 40 and 80 times per year	3-5 years
Constant use 80 times per year	1-3 years

The following factors affect the service life of an avalanche airbag: use in an avalanche, heavy falls, abrasion, wear, long periods of direct sunlight, salt water, salt air, corrosive substances. Renting an avalanche airbag can also drastically reduce its durability. Careful and regular maintenance can increase the service life of an avalanche airbag (*Section 9.2*).

9.6 Specifications

Type:	Removable Airbag System 3.0
Operating temperature:	- 30 °C to 40 °C
Operating altitude:	0 to 6000 m above sea level.
Airbag volume (inflated):	150 l
System without cartridge and without backpack:	approx. 700 g
Filling process:	approx. 3 to 5 seconds
Manufacturer:	Mammut Sports Group AG Birren 5 CH-5703 Seon, Switzerland
CE:	PPE Regulation (EU) 2016/425 (Cat. 2)
Standard:	EN 16716:2017
EU Declaration of Conformity	https://ppe.mammut.com

9.7 Product labeling





TÜV Süd Product Service GmbH, Ridlerstrasse 65,
D-80339 München, Prüfstellennummer 0123

Head Office
Mammut Sports Group AG
Birren 5
CH-5703 Seon
info@mammut.com
mammut.com

mammut.com/airbag