





**ENGLISH**

## CONTENT

|  |           |
|--|-----------|
| <b>1. WELCOME</b>                              | <b>43</b> |
| <b>DEVICE DESCRIPTION AND PARTS</b>            | <b>45</b> |
| <b>2. WARNING NOTICES AND APPROPRIATE USE</b>  | <b>45</b> |
| <b>3. INTERFERENCE</b>                         | <b>47</b> |
| <b>4. FIRST USE</b>                            | <b>47</b> |
| 4.1 First use and test activation              | 47        |
| 4.2 Before every tour or use                   | 51        |
| 4.3 At the end of the tour                     | 51        |
| <b>5. USE IN AN AVALANCHE</b>                  | <b>52</b> |
| 5.1 Activation                                 | 52        |
| 5.2 Behaviour during an avalanche              | 52        |
| 5.3 After the avalanche                        | 52        |
| 5.4 Preparing the ABS® P.RIDE System for reuse | 54        |
| 5.5 Int. avalanche accident database           | 54        |
| <b>6. INDIVIDUAL MODE</b>                      | <b>54</b> |
| <b>7. GROUP MODE</b>                           | <b>54</b> |
| 7.1 Grouping                                   | 54        |
| 7.2 Saving group membership                    | 55        |
| 7.2.1 Group membership with handle folded up   | 55        |
| 7.2.2 Group membership outside radio range     | 55        |
| 7.3 Leaving a group                            | 56        |
| 7.4 Adding a new group member                  | 56        |
| 7.5 Single mode                                | 56        |
| <b>8. MAINTENANCE</b>                          | <b>58</b> |
| 8.1 Self-check                                 | 58        |
| 8.2 Checking the system after an avalanche     | 58        |
| 8.3 Customer service                           | 58        |

|                                   |           |
|-----------------------------------|-----------|
| <b>9. DEVICE COMPONENTS</b>       | <b>59</b> |
| 9.1 Airbags                       | 59        |
| 9.2 Venturi nozzles               | 59        |
| 9.3 ABS® P.RIDE Inflator          | 59        |
| 9.4 Activation handle             | 59        |
| 9.5 Control module/battery        | 59        |
| 9.6 Electronics                   | 60        |
| 9.7 Carrying system               | 60        |
| <b>10. STORAGE</b>                | <b>60</b> |
| <b>11. CLEANING</b>               | <b>60</b> |
| <b>12. TRANSPORT</b>              | <b>61</b> |
| <b>13. SERVICE LIFE</b>           | <b>61</b> |
| <b>14. DISPOSAL</b>               | <b>61</b> |
| <b>15. ADDITIONAL INFORMATION</b> | <b>61</b> |
| 15.1 Troubleshooting              | 61        |
| 15.2 Warranty                     | 62        |
| 15.3 Technical data               | 62        |
| 15.4 Certification and conformity | 62        |
| 15.5 Applied norms                | 63        |
| 15.6 Service center               | 63        |
| 15.7 Label description            | 63        |
| 15.8 FCC & IC Statement           | 63        |
| <b>16. LED SYSTEM CHECK</b>       | <b>66</b> |
| <b>17. LED GROUP MODE</b>         | <b>69</b> |
| 17.1 LED Partner activation       | 69        |
| 17.2 LED, Single Skier Mode       | 70        |
| <b>18. PRACTICE ACTIVATION</b>    | <b>72</b> |
| <b>19. ABS® – HOW IT WORKS</b>    | <b>74</b> |





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## 1. WELCOME

### **Congratulations on your purchase of the ABS® P.RIDE System.**

This manual provides you with information about the function and use of the ABS® P.RIDE System. It applies to every out-of-bounds snow sport enthusiast.

Please read this manual carefully before you use this equipment. Pay special attention to the warning notices and strictly adhere to the information within. We suggest that you keep this user manual in a convenient location so it is easy to consult. Make sure you include it if you choose to pass this equipment on.



Sections in the manual that are marked with this symbol identify risks which, if not observed, may lead to serious consequences.

The ABS® P.RIDE System is an emergency device, which under certain conditions can prevent total burial if activated. It cannot prevent the release of an avalanche. Every avalanche is absolutely life threatening regardless of any equipment. Therefore the ABS® Avalanche Airbag should not encourage you to take greater risks. The ABS® P.RIDE System complies with the requirements of the PSA regulation (EU) directive on personal protective equipment (2016/425), corresponds to EN standard 16716: 2017 and is TÜV-certified.

The ABS® Avalanche Airbag needs a full ABS® P.RIDE inflator in order to function. Each ABS® system is tested to ensure it is fully functional prior to delivery. The

extreme situation of an avalanche requires a practised approach to the ABS® P.RIDE System. ABS® therefore highly recommends that the triggering of the airbag is practised as part of your personal training.



**Please read the user manual before you complete the warranty form online under:**

[www.abs-airbag.com/en/service/warranty-card.html](http://www.abs-airbag.com/en/service/warranty-card.html)

**Your warranty claim will then be extended to 4 years.**

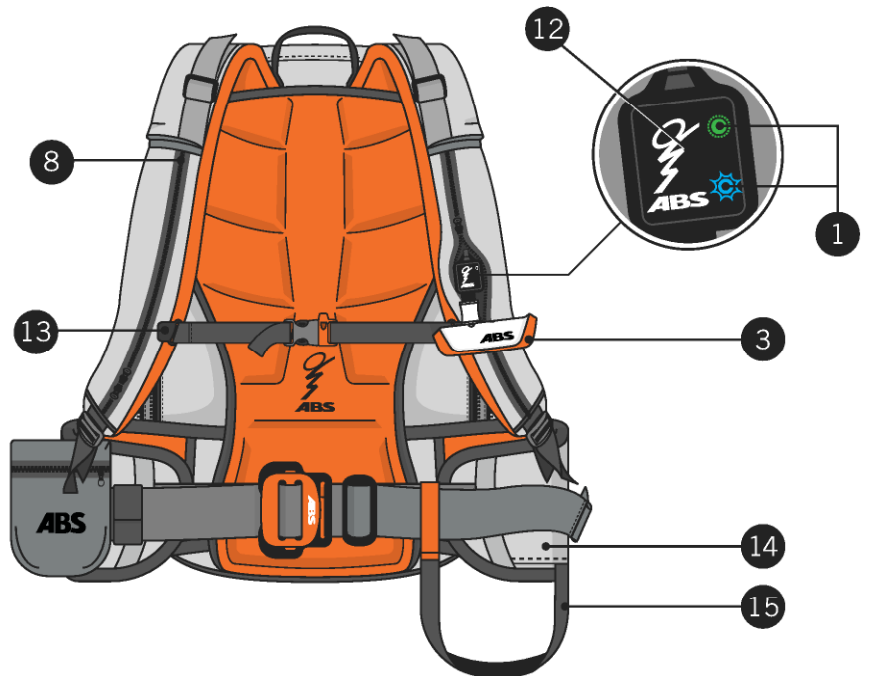
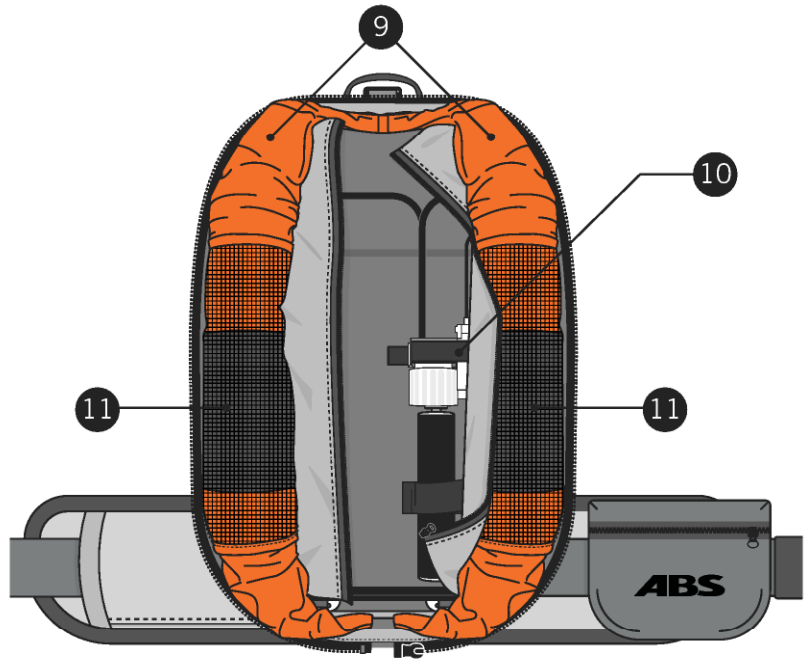
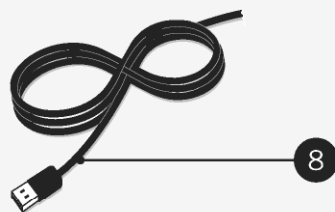
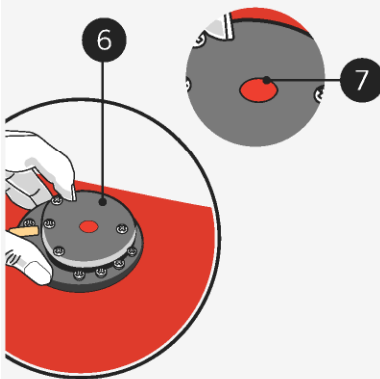
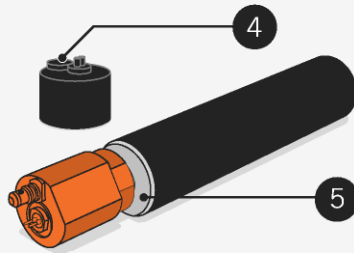
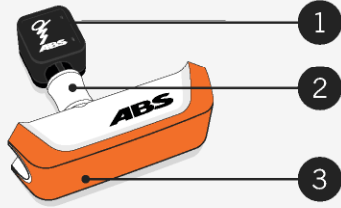
The ABS® P.RIDE System with integrated partner activation significantly increases the likelihood that it will activate in an avalanche situation – and therefore the likelihood of staying on the surface. The ABS® P.RIDE System must be actively triggered – either by you or a member of your group if you are in group mode. In an emergency, each group member is able to activate the airbags of the other members. You can activate your own ABS® Avalanche Airbag at any time using the ABS® P.RIDE System.

Always use the ABS® P.RIDE System in combination with an avalanche transceiver, shovel and probe.

The ABS® P.RIDE System is Made in Germany.



# PRIDE SYSTEM



## DEVICE DESCRIPTION AND PARTS

- 1) LED display
- 2) Safety sleeve on handle
- 3) Activation handle
- 4) Protective cap
- 5) ABS® P.RIDE inflator
- 6) Venturi nozzle
- 7) Release flap
- 8) USB charging cable
- 9) Airbag compartments
- 10) Control module
- 11) Installed Venturi nozzles
- 12) Function key
- 13) Chest strap
- 14) Hip strap
- 15) Leg strap

## 2. WARNING NOTICES AND APPROPRIATE USE

- ⚠ The ABS® Avalanche Airbag cannot prevent an avalanche.
- ⚠ Every avalanche is always absolutely life threatening, with or without an ABS® Avalanche Airbag.
- ⚠ The ABS® Avalanche Airbag should not in any way increase your willingness to take risks.
- ⚠ The function and action of the ABS® System is limited solely to preventing the total burial of an avalanche victim. However, there may be situations when this is only partially or not at all possible.
- ⚠ The ABS® P.RIDE System must be actively triggered – either by you or a member of your group if you are in group mode.
- ⚠ You should always try to activate your ABS® P.RIDE System yourself by pulling the activation handle. ABS® P.RIDE group activation only allows the additional option of remote radio-controlled activation of your ABS® P.RIDE System by other group members if you are in group mode.
- ⚠ In the event of left-handed assembly (Section 4.1, Step 8), ensure that you do not pull the activation handle downwards in order to prevent it activating accidentally.
- ⚠ The ABS® P.RIDE system requires careful handling and proper inspection before each use. Check the day before use that your system is fully functional and the battery is fully charged.
- ⚠ Use only the ABS® original inflator for ABS® P.RIDE.
- ⚠ The ABS® inflator can only be refilled by ABS®.
- ⚠ The system is only fully functional if a full ABS® P.RIDE inflator is used.
- ⚠ Try not to dismantle the ABS® P.RIDE inflator into its individual parts. Any manipulation of the inflator could cause an explosion. Serious risk of injury and death, even for bystanders!



- ⚠ The protective cap must always be attached when the inflator is not assembled. Only remove the protective cap shortly before insertion into the control module.
- ⚠ Always store the inflator out of the reach of children.
- ⚠ Do not leave the inflator in the sun and do not leave it in the car in high temperatures.
- ⚠ Do not try to undo the screws on the handle or control module, as both components have a water-tight seal.
- ⚠ Do not use the system if the top LED is flashing red.
- ⚠ When packing the backpacks, ensure that nothing can damage the airbags and that the airbags are able to open up freely. This applies especially to attachable parts like ice picks, poles, skis, etc.
- ⚠ Fold the airbags according to the instructions. Improper folding inhibits the opening of the airbags. Do not roll the airbags up.
- ⚠ In order to avoid accidental activation where you or other people could be harmed by such an accidental activation, it is recommended that you turn the activation handle to the OFF position and store it on the shoulder strap, especially on chairlifts, in gondolas, in or around a helicopter, bus, train etc.
- ⚠ Do not pull on the handle while the LEDs are flashing in the OFF position, in order to avoid accidental activation.
- ⚠ Please comply with the warning notices for the LED display (see Sections 16, 17 and 18).
- ⚠ Avoid battery deep discharge by not storing the battery for long periods if its charge status is less than 50%. The battery charge status should be between 50–80% before storing for a long period.
- ⚠ Do not leave the system connected permanently to a power source. Disconnect the system once the battery is fully charged (both LEDs are green).
- ⚠ Store your ABS® P.RIDE System at room temperature during extended periods of non-use, away from direct heat sources, UV light or chemical substances such as sulphuric acid, batteries and their vapours.
- ⚠ The system is splash-proof, but not water-proof.
- ⚠ Always replace the USB protective cap after charging.
- ⚠ Do not try to dismantle components. Mechanical damage could cause a malfunction.
- ⚠ ABS® is not liable for injuries associated with an avalanche when using the ABS® P.RIDE System.
- ⚠ This device may be used by children over 8 years of age and over, as well as persons with reduced physical, sensory or mental abilities, or lack of experience and knowledge when supervised or instructed regarding the safe use of the device and the resulting dangers. Children must not play with the appliance. Cleaning and user maintenance must not be carried out by children without supervision.
- ⚠ The battery may only be used with a suitable power supply acc. Point 9.5!

### 3. INTERFERENCE

Please note that the activation handle contains a magnet, which must not be placed close to other electronic devices (avalanche transceiver, compass). Certain avalanche transceivers use magnetic switches that could be disrupted or disabled by magnets.

If you are using an avalanche transceiver with a magnetic switch, you are recommended to wear it on the side opposite to the activation handle and to secure it to the body a sufficient distance away.

Ensure that you keep electronic devices (e.g. mobile phones, radios, head torches) or metal items (e.g. penknives, magnetic buttons) away from the activation handle while it is switched on. Do not wear coats with magnetic buttons!

**Warning for anyone with a pacemaker:** the magnet incorporated in the activation handle may cause temporary interference to a pacemaker. Keep the activation handle 42 mm away from an old pacemaker and 35 mm away from a new pacemaker. See also:

[www.supermagnete.de/eng/safety-neodymium](http://www.supermagnete.de/eng/safety-neodymium)

### 4. FIRST USE

#### 4.1 FIRST USE AND TEST ACTIVATION

The uncompromising functioning and ease of personal handling by the user of the ABS® P.RIDE System are critical. It is not difficult to use, but it is very important to carefully work through the steps outlined below:

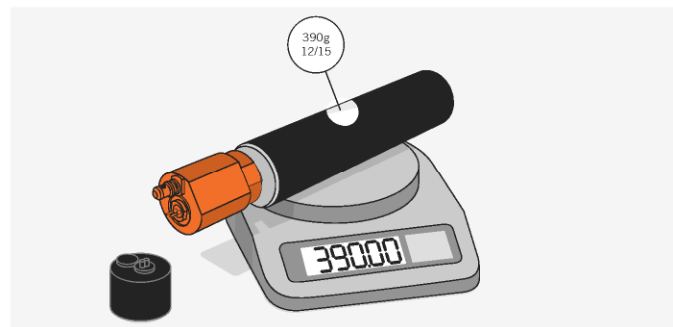
##### STEP 1

##### Charge battery

Before first use, charge the battery fully using the USB cable already connected in the shoulder strap. Charging takes 4–5 hours, depending on the charging device. (See Point 9.5 for more information about batteries)

##### STEP 2

##### Check inflator fill level



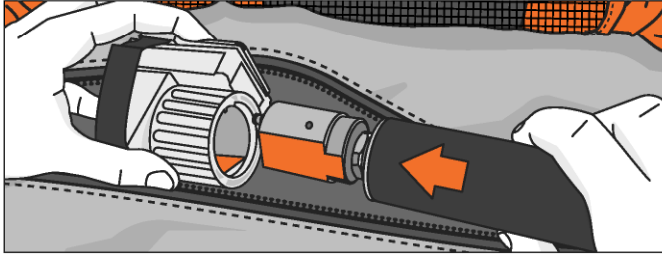
Check the inflator regularly by weighing it without the protective cap. The weight details are specified on the bottle. Tolerance limit +/- 5 grams.

Your local dealer can replace the inflator free of charge if the weight deviates from the tolerance limit. A completely full inflator is an absolute prerequisite for the proper functioning of the ABS® P.RIDE Avalanche Airbag.



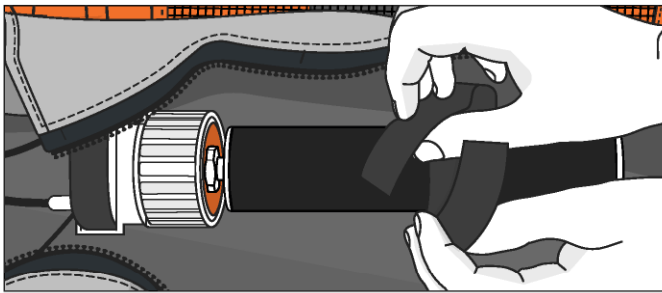
### STEP 3

#### Insert ABS® P.RIDE inflator



Check that the control module is clean before inserting the inflator. Push the black rocker above the control module down with one hand while pulling the seal sleeve on the thumbrest upwards. Insert the inflator so that the two marking lines match up. There should be little resistance when you insert the inflator (otherwise you may have it in the wrong position). You will hear a click if the inflator has engaged correctly.

A system check later will check if the inflator has been inserted correctly (see Step 5 Attaching activation handle)



Attach the inflator to the backpack using Velcro.

### STEP 4

#### Attach straps and belts



Put the backpack on. Adjust shoulder straps to fit your body. The leg strap is stored in the left-hand hip strap flap and you will need to adjust the length. Always fasten the hip, chest and leg straps and adjust them to fit your body. The ABS® P.RIDE System will only be of use to you if the carrying system stays on your body during an emergency! Adjust the straps so that most of the weight of the pack is resting on your hips, rather than being carried by your shoulders.

## STEP 5

### Activate activation handle

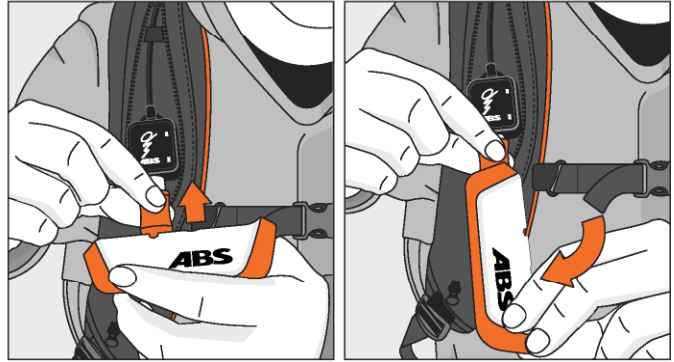


You can store the activation handle on the shoulder strap and it must remain fixed to the backpack. Open the zip fastening on the shoulder strap. Move the handle from the vertical OFF position to the horizontal ON position to activate the system.

A system check is carried out when you move the handle into the ON position. The battery charge status and correct positioning of the inflator are checked. After 7 seconds of system checking, the top LED display flashes green every 3 seconds. The battery charge status is displayed during the first 7 seconds (see drawing on page 67). Once you have followed all the steps up to this point, your ABS® P.RIDE System is ready for use

## STEP 6

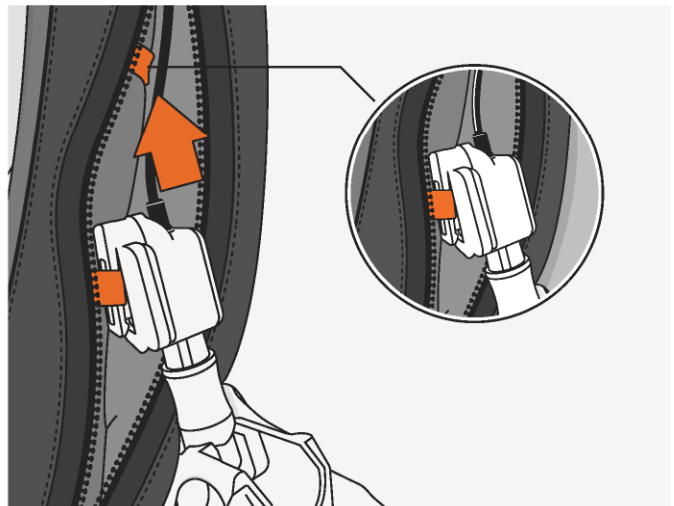
### Deactivate activation handle



To deactivate the activation handle, push the safety sleeve upwards and turn the activation handle to the OFF position.

## STEP 7

### Height adjustment of the activation handle



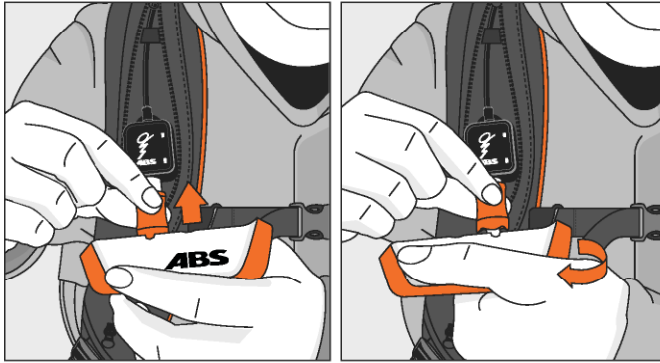
Check when wearing the backpack if the activation handle is positioned at the right height. The correct



position of the activation handle is between the chest and shoulder. If it is not correct, the handle attachment can be adjusted to the appropriate height. Attach the handle to the fastening strap that is most suitable for you. The handle can be attached to the right-hand shoulder strap for those who are left-handed.

#### STEP 8

##### Left-handed assembly

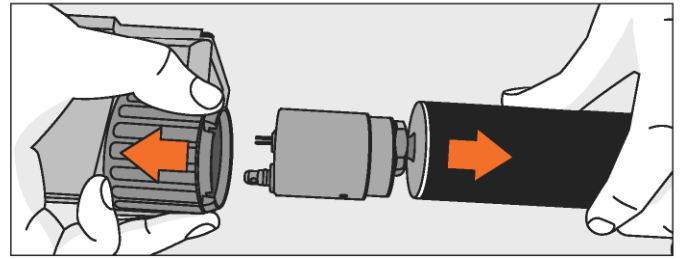


Remove the inflator (see Step 9) and remove the handle in the OFF position from the fastening strap. Loosen the connector under the neoprene and move the cable from the left-hand shoulder strap to the right-hand shoulder strap. Reinsert the activation handle and adjust to the correct height on the strap.

Lift the safety sleeve to the ON position and rotate the handle 180°. Do not pull the activation handle down, as this will activate the device. Repeat Step 5 to check that the handle is ready for use.

#### STEP 9

##### Remove inflator



Push the black rocker above the control module down with one hand while pulling the seal sleeve on the thumbrest upwards. Pull out the inflator with your other hand.

#### STEP 10

##### Practice activation

We want you to feel 100% comfortable with the ABS® P.RIDE System. We therefore strongly recommend that you practice the activation as part of your training so that the functional principle of the ABS® P.RIDE System can be demonstrated as realistically as possible.

Practice the activation so that you get used to the force required and to be able to intuitively activate the airbag in a real avalanche situation.

Move the handle into the OFF position and wait until the LEDs have stopped flashing. Then remove the inflator from the control module (see Step 9) and move the handle into the ON position. The top LED now flashes red and white (training mode). Pull the activation handle.



The required activation force is approx. 6 kg (60 N). The airbags will not inflate; only the tensile force is simulated. If test activation was successful, the top LED lights up white for 3 seconds and then returns to flashing red.

## 4.2 BEFORE EVERY TOUR OR USE

Carry out the following steps before every tour:

- 1 Activate the activation handle (turn to ON)
- 2 Carry out test activation
- 3 Deactivate the activation handle (turn to OFF position)
- 4 Check inflator weight
- 5 Insert ABS® inflator
- 6 Attach straps and belts
- 7 Activate the activation handle (turn to ON)
- 8 Check system is functional (green LED)

## 4.3 AT THE END OF THE TOUR

Turn the activation handle to the OFF position and store it on the shoulder strap. You can leave the inflator inserted.



## 5. USE IN AN AVALANCHE

### 5.1 ACTIVATION



Always activate the ABS® Avalanche Airbag as soon as you notice an avalanche situation. It is better to activate once too often than not at all. In an emergency, always try to activate your own device even if you are travelling in a group.

To activate, pull the activation handle and try to escape. The airbags are self-inflating, regardless of whether you are skiing or have already fallen over.

When the airbags inflate, this opens the quick-burst element on the Velcro closure. The inflated airbags will not hinder you during your escape or evasive action, which you should always attempt to make.

### 5.2 BEHAVIOUR DURING AN AVALANCHE

Once you have activated, only concentrate on your fall line. The way that the airbags are attached on the sides of the pack allows you to move your arms freely. Fight by swimming and pushing away obstacles. Try to steady yourself and protect your head. The shape of the airbags will help to protect your head without compromising your movements and ability to see. Never put your hands through the pole straps and never use safety straps with your bindings! If possible, keep your mouth closed.

As the avalanche comes to a halt, try to keep your upper body and arms above the snow and free yourself from the mass of snow as soon as possible.

### 5.3 AFTER THE AVALANCHE

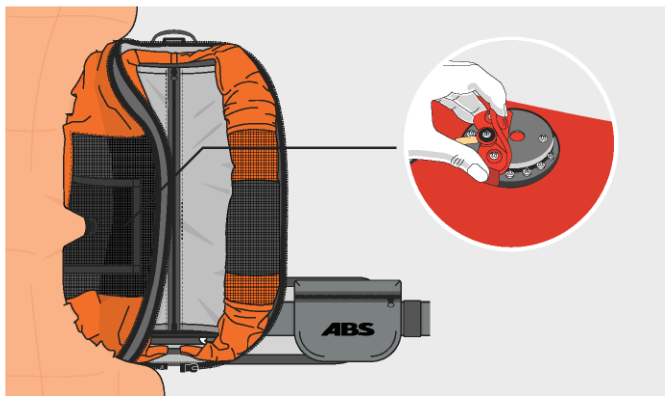
Move to a safe place. Try to help other victims, if you are able to do so. Only deflate the airbags when there is absolute certainty that there is no longer any danger of avalanches and attach a new inflator if possible. If you are still in an avalanche-prone area, leave the airbags inflated.

#### STEP 1

##### Deflate airbags

After an active release you will find the venturi nozzle to vent air behind the orange mesh net, push the red release flaps on the backside of the venturi nozzles and compress the airbags at the same time until they are completely empty.

## Deflate airbags

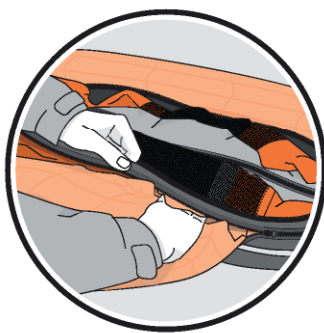


After an activation you find the Venturi nozzle to deflate air behind the orange mesh Net on the air-bag. Push the red release flaps on the backside of the venturi nozzles and compress the airbags at the same time until they are completely empty.

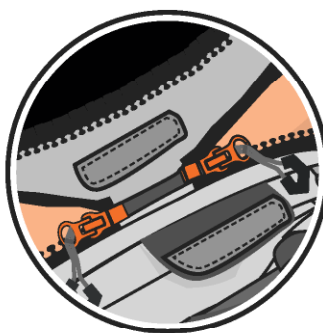
**Important:** Close the inside sections again once the airbags are completely empty (snow protection).

### STEP 2

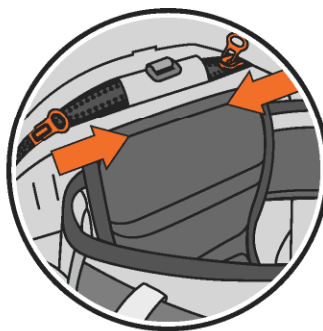
#### Folding airbags



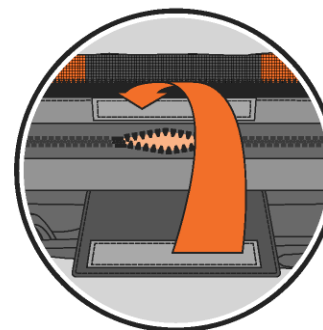
Stuff the airbags into the respective airbag compartment. Don't roll or fold the airbags.



Slide the zippers up and down over the stuffed air-bags from the centre. This closes the zipper. Close the flap across the quick-burst area and across the start of the zip at the top of the backpack the quick-burst area may be left slightly open.



Close the flap across the quick-burst area and across the start of the zip at the top of the backpack the quick-burst area may be left slightly open.



Close the flap across the quick-burst area and across the start of the zip at the top of the backpack the quick-burst area may be left slightly open.

## 5.4 PREPARING THE ABS® P.RIDE SYSTEM FOR REUSE

Carry out Steps 2–5:

- 2 Check inflator fill level
- 3 Insert ABS® P.RIDE inflator
- 4 Attach straps and belts
- 5 Activate the activation handle (turn to ON)

## 5.5 INT. AVALANCHE ACCIDENT DATABASE

Please report any practical use of your ABS® Avalanche Airbag. The findings of all examples of practical use across the globe are collected by the Österreichisches Kuratorium für Alpine Sicherheit (Austrian Alpine Safety Board) and are very important for research and development. You can find all the key information at [www.abs-airbag.com/en/avalanche-accident/](http://www.abs-airbag.com/en/avalanche-accident/). Please fill out the online form in full and also send the information regarding your avalanche accident to your ABS® Service Centre when you send your backpack for inspection.

## 6. INDIVIDUAL MODE

Individual mode is activated when you unfold the activation handle. The top LED will flash green. If you pull the activation handle, only your own airbag will open.

## 7. GROUP MODE

In group mode, both your own airbag and those of group members can be activated.

As soon as you notice that an avalanche has been triggered, affecting you or a member of the group, activate your system immediately. Your airbag opens in 3 seconds and automatically transmits the radio signal for activation to the other group members, causing their airbags to open.

You should also pull the handle if a) people are still attempting to flee the avalanche, b) if it is only small in scale or c) someone is no longer visible in the flowing avalanche. Do not pull the activation handle once the avalanche has come to a standstill.

You should ALWAYS try to activate your ABS® P.RIDE System yourself by pulling the activation handle. Do not rely on other group members – they could also be in danger themselves. The terrain and other unpredictable factors may impair the operation of group activation

### 7.1 GROUPING

To create a group, move the activation handle to the ON position. When the green LED lights up (after approx. 2 seconds), press the function key. The blue LED will light up to confirm that you have pressed the function key. The group is created automatically.

People in the group must be within an activation field of up to 10 m (radius 5 m) and must unfold the handle simultaneously within 3 seconds. Max. group size: 15



people. The ABS® P.RIDE System searches for group members for approx. 20 seconds after the activation handle is unfolded.

The bottom LED lights up blue during this process. If the search was successful, the bottom LED flashes blue, indicating that you are in a group.

The top and bottom LEDs now blink green/blue.

The system is now in group mode. If a group member pulls his/her activation handle, every airbag in the group will be activated.

## **7.2 SAVING GROUP MEMBERSHIP**

Group programming remains in place even if you fold the handle up. If you are outside the radio range for more than 3 hours with the handle unfolded, the system changes over automatically to individual mode.

### **7.2.1 GROUP MEMBERSHIP WITH HANDLE FOLDED UP**

We recommend that you fold up the activation handle when on chairlifts, in gondolas, in or around a helicopter and in any situation in which you wish to avoid accidental activation. Group programming remains in place even if you fold the handle up. The system goes into group search mode when you open the activation handle. This is indicated by the bottom LED flashing blue rapidly. The old group will be recognised again. The bottom LED now flashes blue slowly. This also works if group members have wandered outside the radio range (see 7.2.2) or unfold their handles again at different times.

### **7.2.2 GROUP MEMBERSHIP OUTSIDE RADIO RANGE**

The radio range is 300 m with visual contact. The radio signal is passed from group member to member using a repeater function. This means that the radio range can be expanded significantly and disruptive landscape formations can be circumvented.

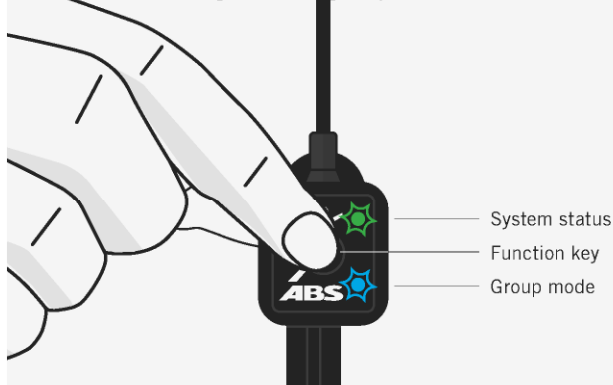
If one or more persons go outside the transmission range for the group, e.g. if they stay in a cabin for longer or decide on a different descent, they remain part of the group for 3 hours with the activation handle unfolded. As soon as this person or these persons come back within range for the group, you must close the handle and reopen it in order to activate group search mode. You will then be added to the group again automatically. The bottom LED flashes blue slowly to indicate that you are part of a group.

If one or more persons are outside the transmission range for the group for more than 3 hours with the handle unfolded, the system changes over automatically to individual mode. The top LED alone will flash green.

### 7.3 LEAVING A GROUP

If you want to leave a group, move your handle into the OFF position and then press the function key. This is confirmed by two red LEDs. Your handle remains ready for use in an emergency during this procedure. When moved into the OFF position, it remains active for 10 seconds (LEDs show you the system status).

If a person with an unfolded handle has no radio contact with the rest of the group for more than 3 hours, he/she will no longer be in group mode (see 7.2.2).



### 7.5 SINGLE MODE

If one person wants to ski or cross a slope alone, you can activate single mode. This function allows the airbags of one or more individuals to be activated without activating the airbags of the other group members.

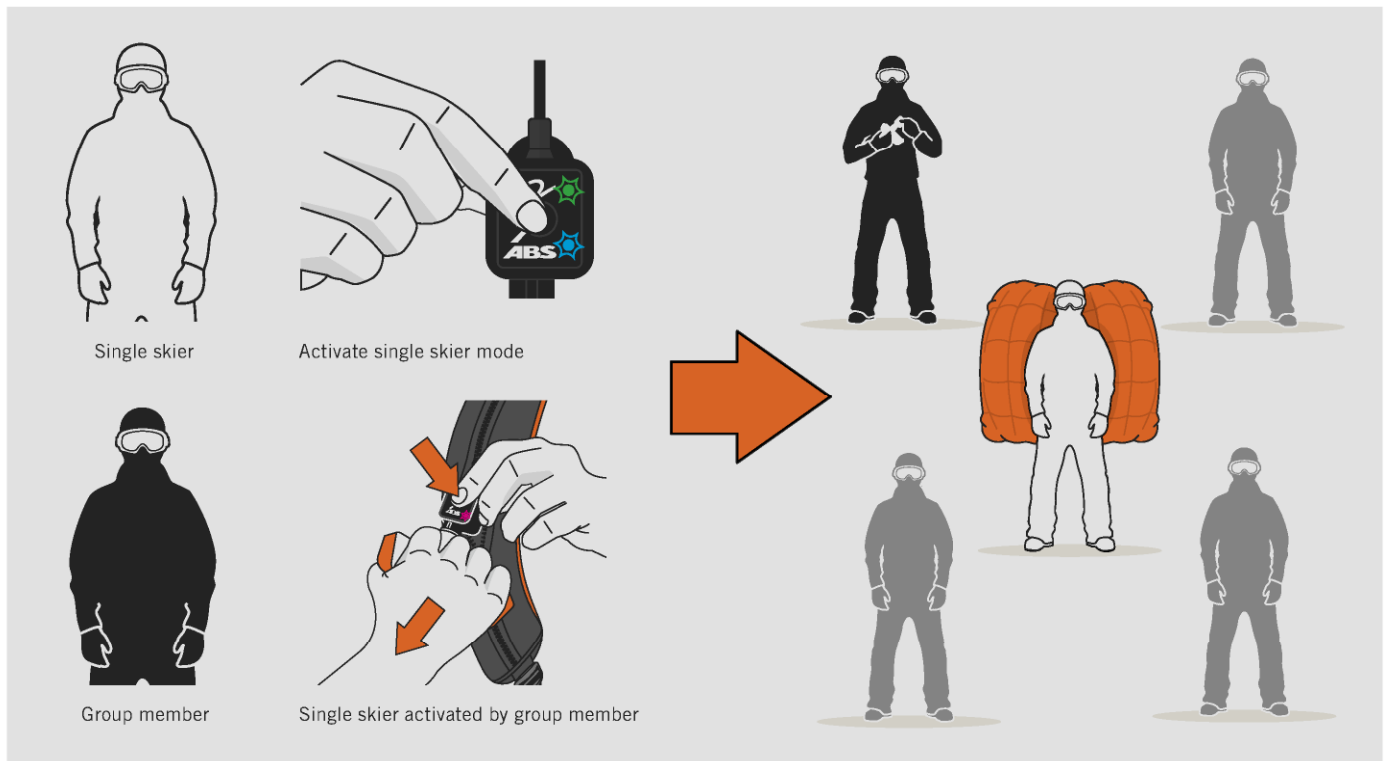
Before the individual goes down the slope, he/she presses the function key on the activation handle and is marked as a single skier. The bottom LED on his/her system flashes blue quickly. The bottom LED flashes blue twice every 3 seconds for the rest of the group, indicating that there is a single skier in the group.

To go back into group mode, the single skier must press the function key again. The frequency of the blue LED slows down again. If the single skier forgets to press the key upon leaving, he/she is automatically included as a normal group member after 10 minutes (slow blue flashing). If a group member detects a dangerous situation for the single skier and the single skier is unable to activate his/her airbag, a group member can activate the airbags for the single skier alone.

**Pull the activation handle with the function key pressed down.** This activates only the airbags of the single skier. All other airbags for group members (including the member who activated the single skier's airbags) remain unactivated.

### 7.4 ADDING A NEW GROUP MEMBER

To add a new group member, all group members must first turn their handles to the OFF position, wait until all LEDs go out and then create the new group (see 7.1)



If the single skier pulls the activation handle him/herself, only his/her airbags are activated.

If a group member pulls the activation handle without pressing the function key, the airbags of the entire group will be activated.

Once his/her system has been activated, the single skier cannot activate the group.



## 8. MAINTENANCE

### 8.1 SELF-CHECK

The ABS® Avalanche Airbag System is virtually maintenance free if the following points are observed.

- We recommend that you carry out regular test activations in training mode.
- Check the release flaps in the Venturi nozzles. Push these inwards several times. The flaps must snap back completely to their initial positions.
- Inspect the condition of the backpack straps, buckles, airbags and Velcro closures on a regular basis.

### 8.2 CHECKING THE SYSTEM AFTER AN AVALANCHE

In an avalanche, the system can be subjected to forces that test the load limits of the material. Sometimes the damage is not visible to the naked eye. We therefore recommend sending the ABS® backpack and empty inflator to your local service centre for a precautionary inspection.

Please fill out the online form for the avalanche accident database in full and submit it to the Österreichisches Kuratorium für Alpine Sicherheit (Austrian Alpine Safety Board). ABS® inspection is free of charge if you send the completed printout of the form with the device. You can find all the key information at [www.abs-airbag.com/en/avalanche-accident/](http://www.abs-airbag.com/en/avalanche-accident/).

**If you are unable to send your ABS® System in right away, please check the following:**

- Check the airbags visually for wear or other damage
- Check the airbag fastening straps for tears
- Check the shoulder, hip and chest straps and all seams for tears
- Check all buckles (adjustment buckles at the shoulder straps, hip and chest strap, leg strap) for damage or deformation.

### 8.3 CUSTOMER SERVICE

To ensure that the system remains fully functional in the event of an emergency, the manufacturer recommends a general service after 3 seasons. The system must be checked after 20 activations at the most. To do so, send your ABS® P.RIDE Avalanche Airbag System, including the inflator, to your local service centre. The ABS® Customer Service will charge a fee for this inspection.

The inspection of all ABS® system parts by Customer Service is far more thorough than any test activation or self-check you may perform.

The ABS® Customer Service companies in your country can be found on our website:

[www.abs-airbag.com](http://www.abs-airbag.com) at  
[www.abs-airbag.com/en/contact.html](http://www.abs-airbag.com/en/contact.html)

## 9. DEVICE COMPONENTS

### 9.1 AIRBAGS

Each of the two airbags has a volume of 75 litres when inflated. They are inflated simultaneously but have separate closure valves. If one of the airbags is damaged, the other one will remain inflated for a sufficient length of time. The special web structure gives the airbags a particularly large projected effective surface to help you stay on the surface.

The pull-out force to detach the airbag from the straps and belts is at least 300 kg (3000 N).

### 9.2 VENTURI NOZZLES

The Venturi nozzles are housed in a mesh bag in the base unit to prevent snow getting into them and are connected to the airbags.

### 9.3 ABS® P.RIDE INFLATOR

The cylinder is attached permanently to the activation module; together, they form the inflator. Please make sure that the provided protective cap is placed on the inflator when the inflator is not inserted in the system. In general, the inflator should always be inserted into the control module. There is an electric ignition in the activation module, similar to that used in the automotive sector and subject to strict requirements. This ignition generates pressure within the inflator. The cylinder is then punctured with a needle. The gas in the cylinder mixes with the intake air when the cylinder

is punctured and inflates the airbags.

The cylinders contain only non-hazardous, non-flammable gases found in the atmosphere, internal pressure 300 bar. Any manipulation of the inflator could cause an explosion. Serious risk of injury and death, even for bystanders! The cylinder is designed for temperatures of between -40°C to +50°C. Only ABS® can refill an empty inflator. Exchanges for a full inflator can only be made with an ABS® dealer. Avoid impacts such as dropping the inflator. The carbon cylinders comply with EC directives ISO 11119-3, ISO 10297 and Directive 2010/35/EU.

### 9.4 ACTIVATION HANDLE

In the ON position, pulling the activation handle generates an electrical impulse that triggers ignition in the inflator. The handle remains fixed to the backpack and is deactivated by moving it into the OFF position. The handle should be kept in the shoulder strap to avoid accidental activation. The activation handle is also used as the operating module for partner activation.

### 9.5 CONTROL MODULE / ACCU

Power Adapter:  
Socket USB A  
Output: 5V 1A

The control module contains a rechargeable polymer lithium ion battery that is almost entirely frost-resistant up to temperatures of -40°C. It only suffers minimal loss of power even on very cold days. When

fully charged, the battery's maximum operating time is 240 hours in individual mode – corresponding to 30 winter sports days of 8 hours each. It takes approx. 2 hours to charge up to 90% and approx. 6 hours for a full charge. The battery is designed for 250 charge/discharge cycles. The battery can be recharged using the USB cable integrated in the shoulder strap with, for example, a TÜV-certified USB charger, power bank, laptop or computer. The temperature must be above 0 degrees when charging.

## 9.6 ELECTRONICS

The electronics are state of the art.  
You can download updates from ABS® via Bluetooth.

The authorised carrying systems are identified by the ABS® logo. The various straps and belts comply with TÜV requirements. In order to ensure that the ABS® P.RIDE System stays on the person's body during an avalanche, it is imperative that the hip and leg straps are properly fastened. If this is not ensured, the ABS® P.RIDE System could be torn away from the body during an avalanche.

## 9.7 CARRYING SYSTEM

The authorised carrying systems are identified by the ABS® logo. The various straps and belts comply with TÜV requirements. In order to ensure that the ABS® P.RIDE System stays on the person's body during an avalanche, it is imperative that the hip and leg

straps are properly fastened. If this is not ensured, the ABS® P.RIDE System could be torn away from the body during an avalanche.

## 10. STORAGE

Check the weight of the inflator regularly as described in Step 2. Otherwise, you can leave the inflator inserted. Always make sure that the protective cap is on the inflator when it is not inserted. Turn the activation handle to the OFF position after every use, in order to avoid accidental activation. The ABS® Avalanche Airbag should be stored in a dry, rodent-free area and away from children. Do not leave exposed to direct sunlight and keep it away from acids and their vapours. Avoid deep discharge of the battery before storage. A battery charge of 50%–80% is optimum for storage if you want to ensure a long working life for the battery. Store the system at a temperature of 15–20°C

## 11. CLEANING

Use only warm water to clean the airbag or backpack material; do not use harsh cleaning agents such as OxyCleaner. Try not to get large volumes of water or liquid on the system. The ABS® P.RIDE System is manufactured in compliance with IP 65 and is therefore splash-proof.

Warning: after cleaning, make sure that the system is completely dry before use, otherwise it may freeze.



## 12. TRANSPORT

Taking your ABS® Avalanche Airbag with you on the plane is generally permitted. The guidelines are outlined in the IATA (International Air Transport Association) reference guide in the section dealing with dangerous goods, Table 2.3A. However, you have to register the ABS® Avalanche Airbag with your airline 14 days before your departure and include it in your booking. One inflator is permitted per ABS® backpack. We strongly recommend that you request the IATA guidelines from your respective service centre or that you download them yourself from our website ([www.abs-airbag.com/en/abs-in-planes.html](http://www.abs-airbag.com/en/abs-in-planes.html)), in order to be able to show them at the ticket counter. We also strongly recommend that you put the copy of the IATA guidelines (which you can download from our website) along with your inflator and backpack in your carry-on luggage.

When you transport the inflator outside the ABS®-P.RIDE backpack, the protective cap must be on the inflator.

When travelling, please pay attention to the latest advice on [www.abs-airbag.com/en/abs-in-planes.html](http://www.abs-airbag.com/en/abs-in-planes.html)

## 13. SERVICE LIFE

The lower limit of 20 activations as prescribed by the EN standard is guaranteed. The service life and functioning of the equipment depends on the level of use. If you comply with the recommended maintenance intervals, the usual service life of the technical system parts should be 10 years with the exception of the battery.

## 14. DISPOSAL

Return the entire backpack to the manufacturer for disposal.

## 15. ADDITIONAL INFORMATION

### 15.1 TROUBLESHOOTING

**The top LED on the activation handle flashes red:**

- Turn handle to OFF position and remove inflator. Turn handle to ON position.
- The top LED continues to flash red. Now carry out test activation.
- If the top LED lights up white briefly after activation, you need to replace the inflator.
- If the top LED flashes red again when you insert the new inflator, please send the system to ABS® for inspection.

**The airbags are difficult to remove from the side compartments and are hard to inflate:**

- Were the airbags folded properly?
- Did the weight of the inflator match the filled weight?
- If you answered both with Yes, send the airbag in for service.
- If you are unsure about either one of these points, activate your airbags once again.
- If the problem persists, send the ABS® System in for service.

## 15.2 WARRANTY

To extend your warranty of the ABS® System from 2 years to 4 years, please complete the warranty card online no later than 30 days after your purchase under: [www.abs-airbag.com/en/service/warranty-card.html](http://www.abs-airbag.com/en/service/warranty-card.html)

## 15.3 TECHNICAL DATA

Effective surface on top of an avalanche: 1,055 mm<sup>2</sup>

System weight: 1,460g (not including inflator)

Airbag material: Polyamide 6.6

Activation: Pyrotechnical electric ignition (as used in the automotive sector) in the puncture unit, nitrogen filling procedure: < 5 seconds

Cylinder: Made from highly durable carbon fibre with an aluminium core, designed to cope with pressures over 300 bar. Comply with EC directives.  
Cylinder may only be refilled by ABS.

Carrying system: Complies with TÜV requirements for extreme operational demands.

Radio frequency band for Europe: 868 MHz (other international frequencies are integrated and can be activated by ABS)

Battery: Lithium polymer battery, operating time in individual mode: 240 h = 30 days at 8 hours each

Operating temperature: -30°C to +50°C

USB charging: Temperature range 0°C to +40°C

## 15.4 CERTIFICATION AND CONFORMITY

Manufacturer: ABS Protection GmbH  
Gundelindenstraße 2, 80805 München  
Country of manufacture: Germany  
Type: ABS® Avalanche Airbag System

The nature of the materials and the kind of workmanship used for the development of the ABS® Avalanche Airbag System are based on the standard values of comparable usage requirements. These standard values form the requirement profile for the material and operating tests conducted by TÜV Süd Product Service GmbH as part of GS mark testing (tested safety), according to PPE Regulation (EU) 2016/425, CE guidelines and EN standard 16716:2017.

However, forces and circumstances may arise during an avalanche that exceed these standard values. We would therefore explicitly point out that the ABS® P.RIDE System in its entirety and in parts (airbag material, attachments, backpack etc.) cannot withstand all possible demands which may arise during an avalanche incident.

TÜV Süd Product Service GmbH, Daimlerstr 11  
85748 Garching Test centre no. 0123  
ABS Protection GmbH is a certified company in accordance with ISO 9001:2015.  
The ABS® P.RIDE System is Made in Germany.

## 15.5 APPLIED NORMS

DIN EN 16716:2017  
PSA-V (EU) 2016/425  
TRG 310  
Directive 201/35/EU  
ISO 11119-2:2002  
Richtlinie 2013/29/EU

Internet address for certificate of conformity:  
[abs-airbag.com](http://abs-airbag.com)

## 15.6 SERVICE CENTER

The ABS® Customer Service companies in your country  
can be found on our website under:  
[www.abs-airbag.com/en/contact.html](http://www.abs-airbag.com/en/contact.html)

## 15.7 LABEL DESCRIPTION



CE symbol;  
test office TÜV Süd 0123



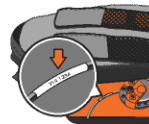
Read the  
instructions



Tested  
safety



EN standard FprEN 16716: 2017;  
Avalanche Airbag Systemse



Serial number on distribution hose to airbag



Date of manufacture e.g. 11/2016



Protection Class 3



Electrical Equipment -  
not in household waste



## 15.8 FCC & IC STATEMENT

### FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

#### FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 15 Clause 15.21 Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### IC COMPLIANCE STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## 16. LED SYSTEM CHECK

### Warning!

The top LED always shows system status, the bottom LED is only used for group activation and is blue.

### System check

The system check runs when the handle is switched on. The colour functions (red, green, blue) of the two LEDs are checked and the system shows the battery charge status.

### Example

The colour functions of the two LEDs are checked first. First the top LED and then the bottom LED light up red, then top green, bottom green, then top blue, bottom blue.

Once the LED check has been completed successfully, the system shows the battery charge status. If the LED remains green continuously for 7 seconds, charge status = 100%.

If the system check has been successful and your system is ready for use, the top LED flashes green every 3 seconds.

If the function key was pressed during the battery check, the system will try and find a group. The bottom LED lights up blue during this time. If it has found a group, the system indicates that you are in a group by making the bottom LED flash blue rapidly. If this is completed successfully, the top and bottom LEDs flash green/blue.

### Operating mode

Once the system check has been completed successfully, the top LED flashes green every 3 seconds until you move the handle into the OFF position.

**Battery charging status 100%**

Battery 100 % charged



**Battery charging status 80%**

Battery 80 % charged



**Battery charging status 50%**

Battery 50 % charged



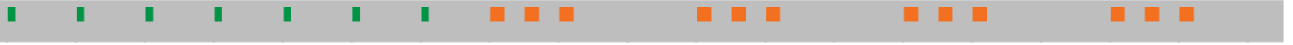
**Battery charging status 20%**

Battery 20 % charged



**Battery charging status 10%**

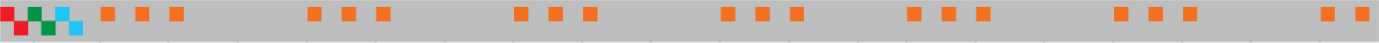
Battery 10 % charged



|  |  |
|--|--|
| <b>Operating mode below 20% –10% Battery</b> | The system check runs normally, after that the top LED flashes orange every 3 seconds. |
|--|--|



|                                 |  |
|---------------------------------|--|
| <b>Operating mode below 10%</b> | The system check runs normally, after that the top LED flashes orange 3 times every 3 seconds. |
|---------------------------------|--|



|                   |   |
|-------------------|---|
| <b>Activation</b> | As soon as the ABS® P.PRIDE system is activated, the top LED lights up white for 3 seconds and then quickly lights up red (because no further activation is possible) |
|-------------------|---|



|                       |                                    |
|-----------------------|------------------------------------|
| <b>System failure</b> | The ABS® system is not operational |
|-----------------------|------------------------------------|



|                            |                                       |
|----------------------------|---------------------------------------|
| <b>Training activation</b> | See the 'Training Activation' section |
|----------------------------|---------------------------------------|

## 17. LED GROUP MODE

### 17.1 LED PARTNER ACTIVATION

#### Group Ready / Grouped

After you press the function key, the system tries to find a group. The bottom LED lights up blue during this time. If the system has found a group, this is indicated by the bottom LED flashing blue rapidly for 3 seconds. You are now in group mode. The top and bottom LEDs then blink green/blue with the same frequency.



#### Group Ready / No Group

After you press the function key, the system tries to find a group. The bottom LED lights up blue during this time. If no group is found, the bottom LED goes out and the top LED flashes green every 3 seconds.



#### Activate Group

If you or another member pull/pulls the activation handle in group mode, all airbags are activated. The top LED lights up white for 3 seconds and the bottom LED lights up blue for 3 seconds for everyone. Then the top LED flashes red and no further activation is possible. The bottom LED is inactive.






17.2 LED, SINGLE SKIER MODE


**You are in single skier mode**

If you are the group member who pressed the function key, your top LED flashes green. Your bottom LED lights up blue for 1.5 seconds to show you that the key has been pressed. It then flashes blue rapidly




**Single skier in the group**

If there is a single skier in the group, the top LED flashes green and the bottom LED flashes 2x blue rapidly every 3 seconds for all other members.



**You activate for a single skier**

A group member is a single skier: your bottom LED flashes 2x blue every 3 seconds to show you that there is a single skier. Pull the activation handle with the function key pressed down in order to activate the airbag of a single skier. The top LED continues to flash green slowly. The bottom LED lights up blue for 3 seconds and then shows you the group status.



**A group member activates  
for you as a single skier**

You are a single skier. Your bottom LED lights up blue for 1.5 seconds and then starts flashing blue rapidly. Another group member has activated your airbags. Now the bottom LED lights up white for 3 seconds and then flashes red; no further activation is possible. The bottom LED becomes inactive.



**You are a single skier and have  
activated your own airbags**

You are a single skier. The bottom LED lights up blue for 1.5 seconds and then starts flashing blue rapidly. If you now pull your activation handle to activate your own airbags, the top LED lights up white for 3 seconds and then flashes red; no further activation is possible. The bottom LED becomes inactive.



## 18. PRACTICE ACTIVATION

To carry out test activation, remove the inflator from your switched-off system (handle in OFF position and LEDs no longer flashing). When you turn the handle to the ON position, the top LED flashes red. The bottom LED always shows the group status.

### Individual mode

The top LED flashes red. When you pull the handle, the top LED lights up white for 3 seconds to show you that activation was successful. The LED flashes red again after the simulation. The system is ready for another practice activation.



### Group mode

The top LED flashes red and the bottom LED flashes blue slowly. When you pull on the handle, the top and bottom LEDs light up white/blue for 3 seconds to simulate successful activation. Then the top LED flashes red again and the bottom LED flashes blue. The system is ready for another test activation.



## 19. ABS® – HOW IT WORKS

With the ABS® Avalanche Airbag you have purchased a device based on many years of experience in system development and avalanche research.

The functioning of the ABS® Avalanche Airbag is based on the physical principle of inverse segregation, also known as the Brazil nut effect:

the moving snow flushes large-volume objects to the surface. The 3D shape of the ABS® P.RIDE Airbag means that it has the greatest possible stable surface; this is the decisive factor in the event of an avalanche.

A large surface area that fits close to the body converts the flow force into buoyancy. Reducing density is only a secondary factor here for buoyancy during an avalanche. The primary factor is increasing surface area. One pull of the activation handle and within seconds the ABS® P.RIDE Avalanche Airbag provides the physical prerequisites for this to happen, with a 30% increase in surface area.

Subject to technical alterations.





The image shows three divers in a clear blue ocean. They are wearing dark wetsuits and have large orange air tanks on their backs. They are positioned diagonally across the frame, from the bottom left towards the top right. The divers are surrounded by white bubbles and water spray, suggesting they are moving through the water. A large, thick, orange arrow graphic curves from the top left towards the bottom right, pointing towards the divers. The text "WITH ABS TWINBAG" is written in white, bold, sans-serif capital letters along the curve of the arrow.

WITH ABS TWINBAG