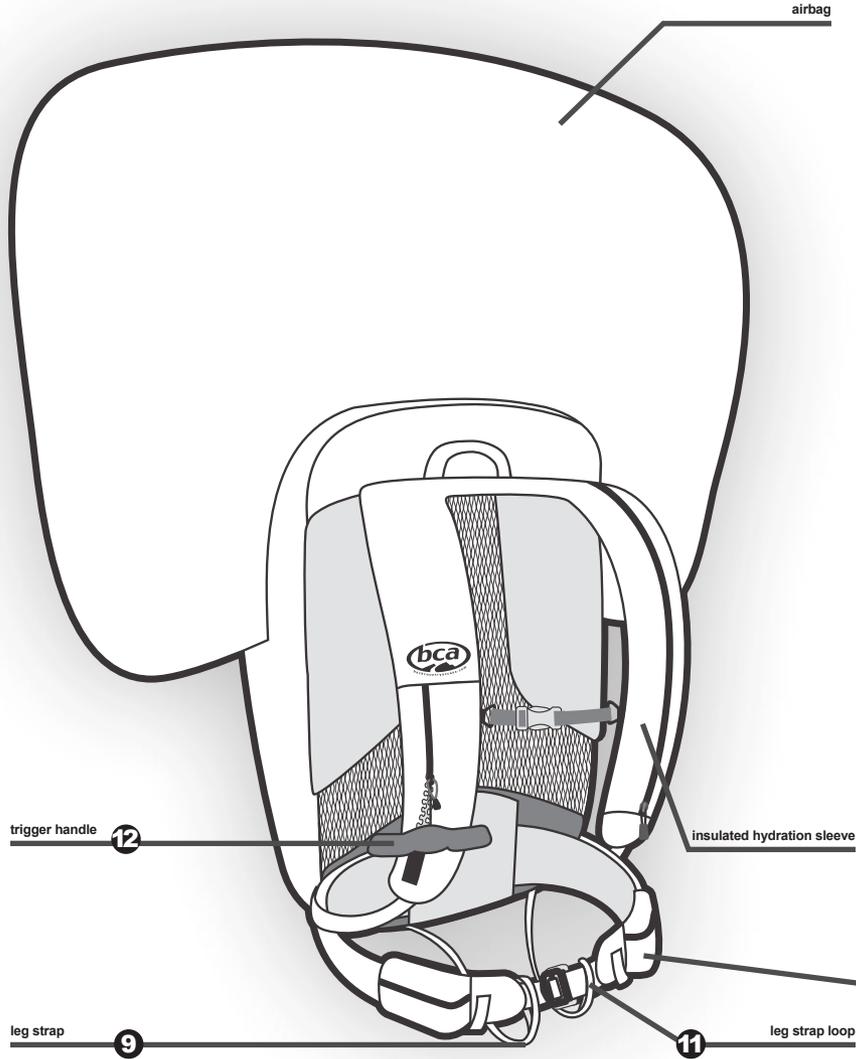


# FLOAT<sup>30</sup>

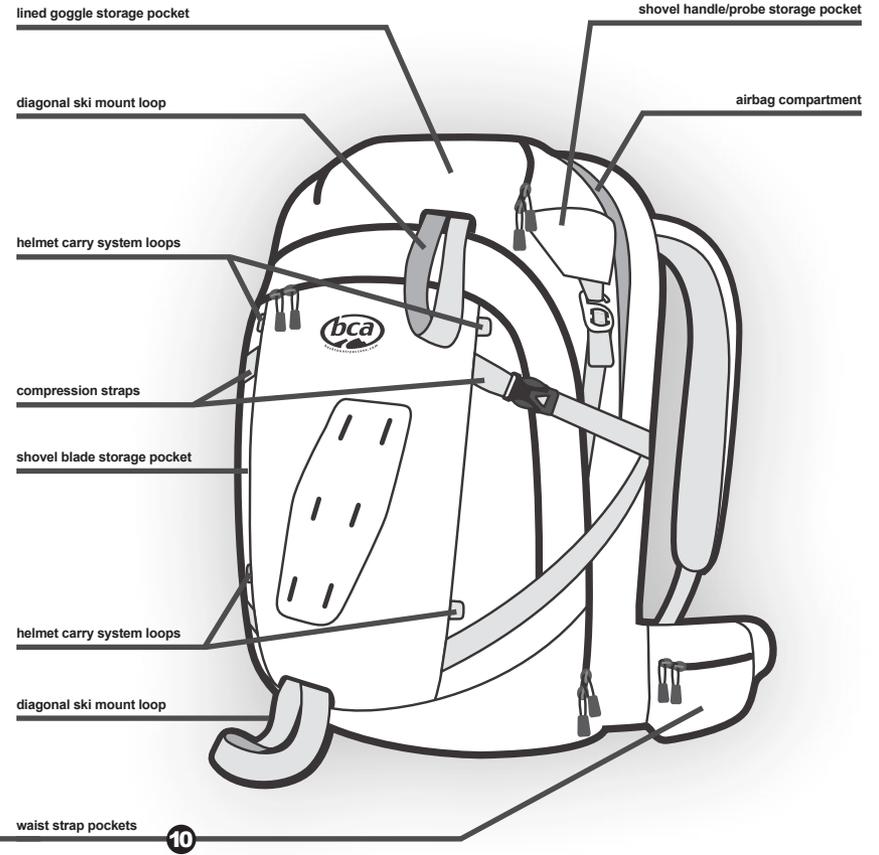
owner's manual



# Basic Components



# Basic Components



### Why do I need an avalanche airbag?

Preventing or minimizing burial depth is the key to reducing avalanche fatalities. That's because the majority of time in an avalanche rescue is spent on excavating the victim. An airbag is designed to keep you at or near the surface, minimizing excavation time.

### How does a pack reduce burial depth?

Inverse segregation, more commonly referred to as the "Brazil nut effect," is the science behind why airbags work. The turbulent movement sorts different shaped objects by size (similar to the way large Brazil nuts will rise to the top when a bowl of mixed nuts is shaken). Smaller objects are more likely to fall into the voids created by the turbulence, while larger objects move to the top. In addition to increasing your overall buoyancy, the Float 30 avalanche airbag is designed to make a backcountry user "bigger" than the surrounding pieces of debris in an avalanche. The Float 30 uses compressed air in the cylinder to fill the bag and make the user's volume larger, reducing—or eliminating—burial depth and increasing your chances of survival.

### Disclaimer

The Float 30 avalanche airbag system is designed to improve your chances of surviving an avalanche by reducing your likelihood of getting buried. The Float 30 must be used correctly, following the guidelines in this manual. Do not modify any aspects of this product or perform any operations not described in this manual.

The Float 30 cannot prevent the release of an avalanche or guarantee survival under any conditions. While the Float 30 will provide some protection from impact, no airbag system can completely prevent injury from trauma. The Float 30 must be used in conjunction with a beacon, shovel, probe, and helmet to provide the best chance of survival. As with other avalanche rescue tools, the Float 30 should not promote taking more risks.

You have invested in lifesaving technology. Be sure you have also invested your time in acquiring the necessary skills to avoid avalanche situations before heading into the backcountry. Take an avalanche awareness course, practice good snow safety skills, and keep your eyes and ears open in the mountains. Prevention is always the best protection!

### Warranty

The manufacturer, Backcountry Access, Inc. (BCA), expressly warrants the workmanship and components of the Float 30 for three years after the date of retail purchase. All parts will be either repaired or replaced free of charge, including labor, by the manufacturer. This warranty does not cover damage to the product caused by improper use or excessive wear and tear. Direct all warranty claims to BCA or your retailer. All claims must include proof of purchase and a return authorization number. *To ensure warranty protection and periodic technical updates please register online at [www.backcountryaccess.com/warranty](http://www.backcountryaccess.com/warranty).*

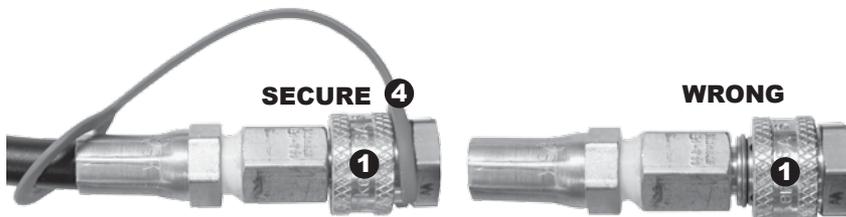


## Equipment Check

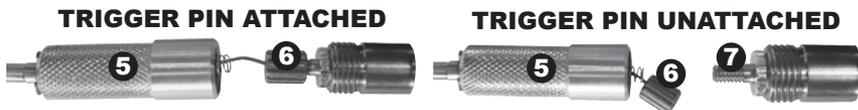
Be sure to complete the following steps before each use of the Float 30 avalanche airbag pack. Refer to the numbered images and diagrams for visual reference.

### System Fittings

Check the quick connect fitting **1** between the compressed air cylinder **2** and the air hose **3** to make sure it is attached securely. The plastic coupler gauge **4** must fit in place to ensure the system is properly connected.



Unscrew the trigger cover **5** and make sure the trigger cable nut **6** is attached securely to the trigger pin **7**. Replace trigger cover.



### Air Cylinder

Check the pressure gauge **8** on the compressed air cylinder and make sure it is between 2500 and 2700 psi at room temperature (approximately 70°F or 21°C). Pressure must be checked at room temperature for the reading to be accurate. Check pressure before every use. Pressure must be between 2500 and 2700 psi at 70°F (21°C) for system to operate properly. Once the system is exposed to cold, the pressure will drop. If the pressure is ever observed below 2000 psi, at any temperature, the airbag may not fill completely. **PRESSURE MUST BE IN THIS RANGE OR THE SYSTEM MAY NOT FUNCTION PROPERLY.** See "Installing Compressed Air Cylinder" on page 9 for replacement details.

Inspect the cylinder. Do not use a cylinder that is dented or damaged.

### Pack

Check that the fabric inner liner that houses the compressed air assembly is zipped completely. Be sure nothing is inside the inner liner other than the airbag components.

Check to make sure that nothing is obstructing the airbag compartment on the outside of the pack.

## Using the Avalanche Airbag

### Pack Adjustments

Your pack should be properly fitted before you head into avalanche terrain. The forces of an avalanche can rip the pack from your back if it is not secured to your body.

### Attaching Leg Straps

The leg straps **9** are stored behind the waist strap pockets **10**. Pull one leg strap out and loosen the adjustment on the strap so you have plenty of length to work with. With the loop **11** in your hand, bring the strap around the outside of your leg then through your legs.



Insert the waist strap (the same side as the leg strap) through the leg strap loop. Repeat process for the other leg, then fasten the waist buckle. Tighten the adjustment on the leg straps until they are snug but comfortable.



### Waist Buckle

There are two parts to the buckle: male and female. Insert the male part into the widest opening of the female part. Tighten the waist strap until snug. When attached correctly, the webbing and the buckle should lay flat against your body.



## Using the Avalanche Airbag

### Shovel and Probe Storage

The shovel shaft and probe should be stored in the long side pockets and secured with the strap and fastener. The shovel blade can be stored in the front pocket for easy access. Shovels with long blades or ferrules can be placed upside down, with the ferrule extending through the hole at the bottom of the shovel pocket. If you prefer to carry your shovel and shaft fully assembled, make sure you secure the shaft with the Velcro attachment at the top of the shovel pocket.

### Ski Attachment

Skis can be mounted to the pack using the diagonal ski straps concealed in the lower left and upper right corners of the pack.

### Hydration

The Float 30 is designed to accommodate hydration but does not include a hydration system. To add a hydration system, feed the hydration tube (bite valve may need to be temporarily removed) through the back of the left shoulder strap, through the hole in the back panel. The reservoir can be secured by using the bladder hanger cord inside the pack.

### Deployment

When traveling in avalanche terrain, unzip the pocket where the trigger handle ⑫ is stored (see image on right for reference). In case of an avalanche, pull the trigger handle quickly in a downward motion. Try to avoid pulling the trigger across your chest



### What to Expect

The airbag should exit the backpack and fill completely in approximately three seconds. The airbag will continue to build pressure for a few seconds longer until the system pressure equalizes. The airbag should hold air for several minutes until the threat of an avalanche has passed.

### After Deployment

Release the air from the airbag by pressing the release valve with your finger. The valve is located underneath the orange release valve cover ⑬. Do not use hard or sharp objects to hold the release valve open, as they could damage the valve-sealing surface. Re-pack the airbag into the airbag compartment. See “Packing the Airbag” below for details. Replace the compressed air cylinder before using again. See “Installing Compressed Air Cylinder” on page 9 for details. If you have deployed your Float 30 in an avalanche, please contact BCA for a free product inspection.

### Packing the Airbag

Airbag must be stuffed, not folded or rolled, into the airbag compartment. DO NOT ROLL THE AIRBAG OR THE SYSTEM MAY NOT DEPLOY PROPERLY. Empty any residual air from the airbag

## Using the Avalanche Airbag / Maintenance

using the release valve. After most of the air has been released, disconnect the air hose before stuffing the airbag. Stuff the sides of the airbag first, then the top. The system deploys best when the airbag seam faces toward the Velcro flaps of the airbag compartment. Close the Velcro flap securely along its length. If there are tight spots where the Velcro won't close completely, redistribute the airbag as needed. If the airbag is wet, always dry it completely before repacking.

### Maintenance and Storage

No scheduled maintenance is required as long as the system is stored in a cool, dry place. Do not expose a charged Float 30 cylinder to temperatures exceeding 130°F (55°C) or below -22°F (-30°C).

### Periodic Deployment

BCA recommends deploying the Float 30 at least once per year, both to make sure the system is operating correctly and to be sure the user knows how to operate the equipment efficiently. Put it on, pull the trigger and replace the cylinder with a refill before the season starts.

### Discharging Compressed Air Cylinder

If the compressed air cylinder ② is pressurized but the pressure is below 2500 psi at 70°F (21°C), it should not be used in the backcountry but it may be used for a practice deployment. Simply deploy the airbag by pulling on the trigger handle.

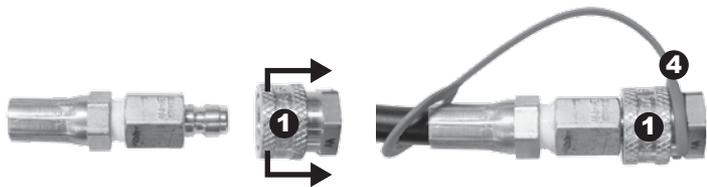
If the compressed air cylinder must be discharged without deploying the airbag, disconnect the quick connect fitting ① between the compressed air cylinder and the air hose (coupler gauge ④ will need to be removed), zip the fabric inner liner, close the pack and pull the trigger handle. The compressed air will empty directly into the pack.

**DO NOT POINT CYLINDER OUTLET PORT AT ANYONE OR ANYTHING, AS IT COULD CAUSE DAMAGE OR INJURY. DISCHARGING A COMPRESSED AIR CYLINDER IS LOUD – PERSONAL EAR PROTECTION IS RECOMMENDED.**

### Installing Compressed Air Cylinder

1. Remove packaging caps from pressurized air cylinder. Unzip the fabric inner liner in the pack. Screw the trigger cable nut ⑥ onto the trigger pin ⑦. To grasp trigger cable nut before threading it on the trigger pin, it may be necessary to push the trigger handle ⑫ back in, to expose more cable on the other end.
2. Screw the trigger cover ⑤ over the trigger cable nut.





3. Connect the quick connect fitting ① by pulling the large ring toward the air cylinder. It should click back into place when air hose nipple is properly connected. Coupler gauge ④ is not essential, but should fit in place to ensure air hose is connected properly.
4. Position air cylinder ② next to the ejector assembly ③ as shown on page 5. Secure air cylinder into place with the elastic and Velcro straps.
5. If you're replacing a discharged cylinder, return empty cylinder to retailer or refill center to refill or exchange it for a recharged one. See "Shipping a Compressed Air Cylinder" below for shipping instructions, if shipping is required.
6. To disconnect an empty cylinder, follow these steps in reverse.

### Shipping a Compressed Air Cylinder

DISCHARGE CYLINDER BEFORE SHIPPING.

Compressed air cylinders may not be shipped pressurized without proper (Hazmat) certification. Compressed air cylinders must be shipped in original packaging to prevent damage. Please return protective covers. When shipping unpressurized cylinders in their original packaging, please make sure you remove any Hazmat labels or markings that were used when they were shipped pressurized.

### Transportation Guidelines

While the Federal Aviation Administration (FAA) has specifically approved avalanche airbags with pressurized cylinders for airline travel, many individual airlines have not. Airport security personnel have no way of knowing what your pressurized cylinder contains or its purpose.

The best way to travel by airline with an airbag is to discharge the compressed air cylinder before you are anywhere near the airport (discharging the cylinder will create a loud noise, not unlike a gunshot), unscrew the cylinder head and carry the pack through security so you can explain what it is. When you get to your destination, locate a retailer or refill center and exchange or refill your empty cylinder. The cylinder head can be screwed back on the cylinder by hand.

Do not attempt to bring a pressurized system through security or check one in your luggage. Transportation Security Administration (TSA) personnel will ask you to remove the cylinder head so they can see that the cylinder is empty. If you discharge the cylinder at the airport, you are not likely to reach your destination.

This is a basic introduction to avalanche rescue techniques. On our website, you will also find a list of avalanche instructors. We strongly suggest taking an avalanche course in your area before venturing into the backcountry. Each person needs a working beacon, probe and shovel—and must know how to use them. Before leaving, call your local avalanche forecast center and determine the danger level in the area you intend to visit:

US: [www.avalanche.org](http://www.avalanche.org)

Canada: [www.avalanche.ca](http://www.avalanche.ca)

Europe: [www.lawinen.org](http://www.lawinen.org)

### Searching for victims

If a member of your group is buried, you must perform a beacon search. The objective is to find the strongest signal (lowest distance reading) and immediately begin probing the area. In the event of a burial, switch all avalanche beacons to search mode. The guidelines below assume the use of a digital beacon.

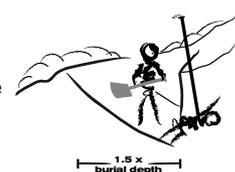
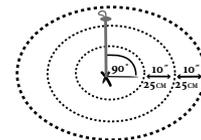
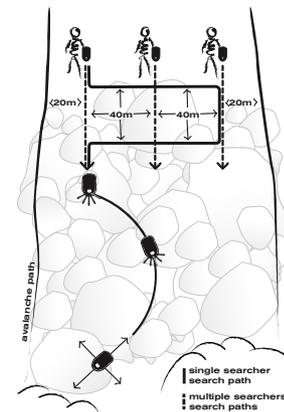
**Signal search:** If there is a "last seen point," start your signal search there. Otherwise, start your signal search at the top, bottom or side of the slide path. See diagram on right to establish a search pattern.

**Coarse search:** Once a signal is engaged, align your beacon so that any of the center three lights are flashing and move quickly in the direction it is pointing. Make sure the number in the distance display is decreasing. If it is increasing, turn 180 degrees. Inside ten meters, move slowly and try to keep the center search light engaged.

**Fine search:** Within three meters, use your beacon close to the snow surface and look for the smallest distance reading. Confirm by "bracketing" in the perpendicular direction.

**Probing/Pinpointing:** At the point where the distance has reached a minimum, probe the area in concentric circles, with each probe hole about 10 inches (25cm) apart. Your probe should enter the snow perpendicular to the slope. Once you have confirmed the victim's location, leave the probe in the snow.

**Shoveling:** While shoveling might seem elementary, it usually consumes the majority of time during an avalanche beacon rescue. For best results, start shoveling just downhill of the probe. Make your hole one "wingspan" wide. In burials deeper than one meter, excavate downhill about 1.5 times the burial depth. For more advanced shoveling techniques, see our website: [www.backcountryaccess.com/education](http://www.backcountryaccess.com/education).



## Additional snow safety essentials from Backcountry Access:

### **Tracker avalanche beacons**

BCA's Tracker beacons are the easiest to use because of their rapid processors and simple user interface. A real-time, digital display shows both direction and distance with bright red LEDs (light emitting diodes). North America's best-selling avalanche transceiver.



### **Avalanche shovels**

BCA shovels are the strongest and lightest on the market. Our oval shaft and 6061 aluminum blade maximize the strength-to-weight ratio. Arsenal shovels are available with integrated probe or saw.



### **Avalanche probes with Quickie hardware**

Every second counts. BCA probes are manufactured with our lightning-fast Quickie tensioning hardware for fast deployment.



### **Snow study tools**

BCA offers a full line of snow study equipment including slope meter, crystal card, magnifying loupe, digital thermometer, snow saw, and field book. Kit available with carrying case.

### **Training DVD**

*Take Charge: Leading a Companion Rescue.*

Learn how to organize and execute a fast avalanche rescue. Produced with Teton Gravity Research (18 min). Available from our website.



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