



# FLAT VALVE/UNIVERSAL PULL DUMP KIT

## Installation Instructions

### Introduction

**Flat Valve Kit** is a unique, low profile pull dump/over pressure valve kit designed to fit newer model BCs. It can function as a shoulder pull dump or rear pull dump. Please note that the flat valve kit is not interchangeable with the universal pull dump kit or the flat e-valve.

**Universal Pull Dump Kit** is designed to replace most pull dump/over pressure valves, including shoulder pull dumps, rear pull dumps and standard pull dumps. Also, the kit can be added to BC models that have capped manifolds.

A **shoulder pull dump** has the cord routed through a sleeve coming down the right shoulder side of the BC. A **rear pull dump** has the cord routed through a small webbing loop near the dump valve to keep the pull knob in the same location. A **standard pull dump** has the cord and pull knob hanging freely from the dump valve.

### Required Tools

Needle nose pliers	White chalk or other marking device
Ruler	Thin, stiff wire with hooked end (wire coat hanger works well)
Lighter or matches	

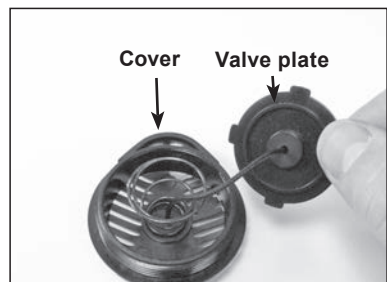
### Preparation

It is best to work on a flat table large enough to accommodate the BC. Disconnect all the waist, shoulder, and chest buckles, and undo the cummerbund (if equipped). Lay the BC flat on the table with the pull dump facing upward. Confirm existing pull dump has been removed

### Installation of dump valve

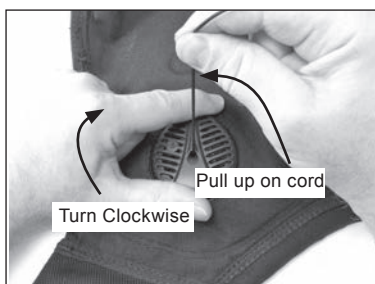
#### Step 1. Installation of spring

Properly position the spring inside the dump valve: Flat valve (small) or Universal dump valve (wide) end of the spring fits in the recessed hole on the inside of the cover. Flat valve (wide) or Universal dump valve (small) end of the spring fits over a small boss on the valve plate.



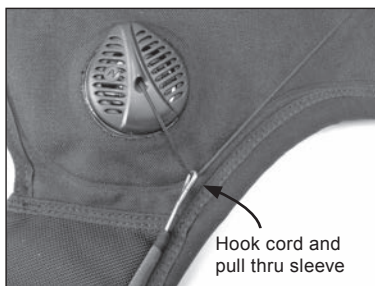
## Step 2. Screw on dump valve

Pull the cord tight enough to compress the spring and thread the dump valve onto the BC. Do not release the cord until the dump valve is threaded all the way onto the BC.

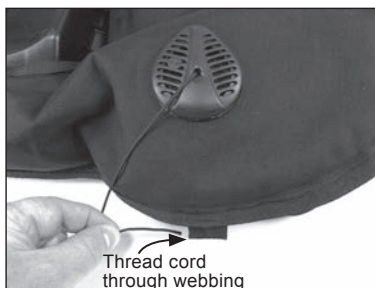


## Step 3. Threading the cord

**Shoulder dump:** Take a stiff wire with small hook at the end (an old coat hanger works well) and insert it through the sleeve. Put the cord into the hooked end of the wire and pull the wire through the sleeve.

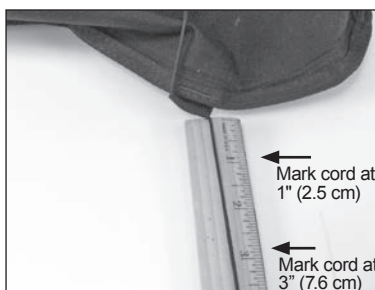


**Rear pull dump:** Thread the cord through the webbing loop such that the cord is pointing away from the backpack.



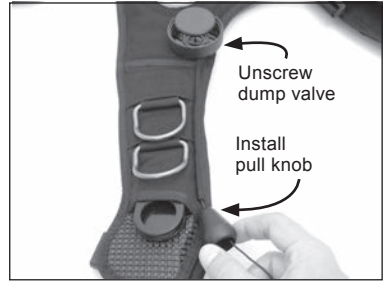
## Step 4. Mark the cord

Lightly pull on the cord until it is taut, but don't pull hard enough to open the dump valve. Measure 1" (2.5 cm) from the edge of the sleeve or webbing loop and mark the cord with white chalk or some other marking pen. Then make another mark 3" (7.6 cm) from the edge of the sleeve or webbing.

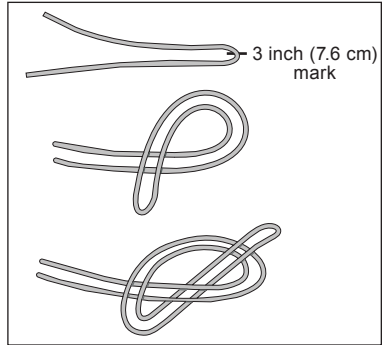


### Step 5. Install the pull knob

Unscrew the dump valve from the BC. Pull on the cord so the dump valve is against the cord sleeve or webbing loop. Insert the free end of the cord through the small hole in the top (small end) of the pull knob. Slide the pull knob up the cord so it rests against the sleeve or webbing loop.

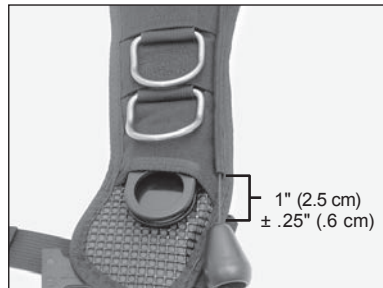


Fold the cord at the 3" (7.6 cm) mark. Tie a double overhand knot as shown. The knot should be 1/2" (1.3 cm) from the 1" (2.5 cm) mark. Pull down on the pull knob so it sits snugly against the knot. Follow the instructions in step 1 & 2 p. 1 & 2 to reinstall the dump valve assembly.



### Step 6. Check pull knob position

After the dump valve assembly is re-installed, the pull knob should be approximately 1" (2.5 cm)  $\pm$  1/4" (.6 cm) from the sleeve or webbing loop.



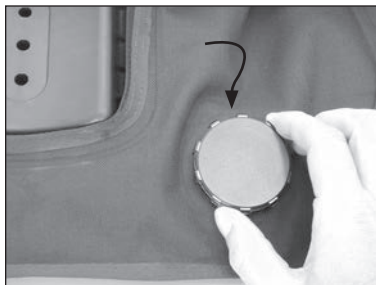
### Step 7. Trim and seal the cord

After confirming that the cord length is correct, cut the cord leaving about a 1/2" (1.3 cm) tail. Using a match or lighter, momentarily burn the end of the cord to prevent it from fraying. As soon as the cord begins to "melt" remove the flame.

## Standard Rear Pull Dump or Capped Manifolds

### Step 1. Remove the existing dump valve manifold cap

Unscrew the existing pull dump by turning it counterclockwise. If the manifold is capped, unscrew the cap and remove the gasket located in the manifold.

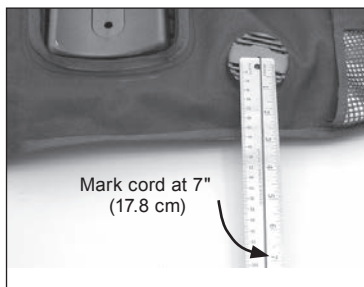


### Step 2. Screw on new dump valve

Properly position the spring inside the dump valve: The wide end of the spring fits in the recessed hole on the inside of the cover; the small end of the spring fits over a small boss on the valve plate. While pulling on the cord to keep the spring in place, thread the dump valve onto the BC. (see step 1 & 2 on p.1 & 2).

### Step 3. Measure and cut the cord

Measure seven inches from the dump valve cover and mark the cord with white chalk or some other marking pen. Cut the cord at the 7" (17.8 cm) mark. Using a match or lighter, momentarily burn the end of the cord to prevent it from fraying. As soon as the cord begins to "melt" remove the flame.



### Step 4. Install the pull knob (refer to step 5 p. 3)

Insert the free end of the cord through the small hole in the top (small end) of the pull knob. Slide the pull knob up the cord so it rests against the cover. Fold the cord 2" (5.1 cm) from the end and tie a double overhand knot. Pull on the pull knob so it sits snugly against the knot.



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