OTTER DRYSUITS
BALANCED PEE VALVE

INSTRUCTIONS

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OTTER BALANCED PEE VALVE ASSEMBLY .

The OTTER balanced design is constructed to prevent any water from entering the connection assembly and to reduce the resistance of water pressure (thus the name balanced). This is accomplished through the installation of one-way check valves. A one-way check valve screwed into the delrin base only allows fluid to flow out of the suit, preventing water from entering the connection assembly whether the condom attachment system remains in place or not. A final safety measure exists in the screw down cap included with this unit that can be turned into place, sealing off the ambient water. However, the need for the cap is unlikely since the connection hardware and the check valve must fail to allow water into the suit. Divers may opt to leave the cap in position but open, or closed. A second check valve allows air in the suit to equalize with air in the connection/catheter assembly. This check valve eliminates the resistance of water pressure while the diver expels, reducing the risk of a connection failure. The balanced check valve assembly not only allows for greater redundancy and ease of operation, but prevents ambient water from entering the connection/ catheter system. The elimination of ambient water in the connection system is particularly beneficial in cold water or questionably pure water sources. Due to the necessary addition of the two check valves,

INSTALLATION

You will need the following:

OTTER Pee valve kit.

1.Pee valve assembly.

2. Special Spanner to tighten valve nut.

3, Thin washer .

4. glue

1) The diver must carefully choose the area where he wants to place the valve body. Location is most commonly on the inner thigh. It is important to note that divers vary in their preference for the connection tube location. Some individuals prefer to point “themselves” down and to one side or the other. This preference would dictate a location on the left or right thigh. Others prefer to angle “themselves” up with the connection tube running over their underwear and down to the delrin base. Still others prefer to forgo the use of underwear beneath an insulation garment, reducing the risk of a kink in the hose assembly. Most dry suit divers use undergarments with a front zip design and therefore will either have to cut another hole in the insulation (not particularly recommended) or run the tubing up over the lowest part of the zipper and down to the base unit. In any case, care should be taken to choose the location of the base unit so that unnecessary holes do not have to be repaired later.

Check hose routing with your undergarments before deciding on a location for the valve typical installation location on the inside left thigh.

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2) Creating a hole.

We have supplied a thin rubber coated fabric washer ,this can be used as a template to draw around for the size of the hole to make in the suit
and when this is glued on the out side of the suit this makes a better seal and will stop the neoprene stretching on a neoprene suit.
Place the washer on the suit to where you have decided the pee valve needs to be draw around the washer, the hole and the out side edge.
A hole may be placed in the suit in one of several ways. It may be punched into the suit with a professional punch In this situation, place a board on the inside of the suit to support the suit and prevent accidental holes. Be careful not to damage the inside of the suit with the support. With a hammer, use the punch to place a very neatly sized hole into the suit.
A hole may also be burned into the suit with a pencil-style soldering iron, but great care should be taken not to burn any other areas of the suit. For this method, place a small hole on the mark made during the location selection from step one. Slowly work that hole outward by making ever-widening circles in the material. Remember that most materials will stretch, so the hole should be a little smaller than the actual size of the threaded nipple (especially with neoprene).

This method is especially recommended for fabric-style dry suits, although it is very effective for neoprene as well. Using a hole punch is more efficient, easier and safer for your suit than most other methods of creating a hole. However, many divers have successfully used a variety of methods. Be certain that the method you use gives you control over the size and shape of the hole I have used a small pair of scissors to do this job for years cut the hole a little smaller on a neoprene suit or to the inside of the chalk mark for membrane suits try the valve in the hole to see if it sits correctly try the washer over the valve as it sticks out making sure the line you drew around the washer is still ok to glue to so as not to show any glue when finished take the valve out.
Glue the fabric side of the washer with 2 coats of impact glue letting it dry between coats.
And the same with the suit glue inside the circle 2 coats put the patch carefully to the glued area on the suit and press down.
Try the valve again to make sure it fits ok and can be pointed in the direction you wanted if all is ok remove valve put a good layer of glue on the flat valve surface the one with the 2 rings on it push the valve back through the suit put the nut on the thread and screw down making sure the valve is where you want it use the spanner/tool supplied to tighten nut compressing suit material leave over night.
Recheck that
THE NUT IS STILL TIGHT AS THE SUIT MATERIAL ESPECIALLY ON A NEOPRENE SUIT AS NOT BEEN COMPRESSED EVEN MORE.

If ok screw the cap on ,screw the small s/steel screw in when the cap is tight try to unscrew cap it should now stop before the end of the thread screw tight again and you are ready to go.