

# ORCA - fashioned for speed

For the last 3 years I have been using Orca wetsuits exclusively for training and record attempts. At first it was a personal choice to use the wetsuit that I considered most effective for constant weight freediving, now I am fortunate enough that Orca have also become my sponsor.

Although they are originally developed for New Zealand's world-beating triathlon team, Orca's suits are currently better than anything else on the market for freediving, especially for no-fins disciplines, where a high performance suit is critical. The main reason is the minimal neoprene used in a one-piece suit. With less neoprene, and therefore less buoyancy, the freediver can get away with less ballast weight, and will have a reduced buoyancy change during the dive. Now most one-piece suits on the market are worthless to freediving due to the amount of water they let in, but Orca's exceptional neck seals and streamline zip cover mean that you stay completely dry inside the suit. Also, leaving the neck and head exposed to the cold water will enhance the dive reflex (not to mention make it easier to hear your dive alarm!)



*past, present and future?*

*Orca's developments for triathlon seem to bring them closer to the perfect suit for freediving also.*

The first Orca suit I bought was a *Pflex*, but this has since been replaced by the far superior *Apex2*, the suit used in my recent 86m CNF and 108m FIM world records. Amongst its many advantages, the *Apex2* has such an incredibly flexible underarm panel that there is almost zero resistance to arm extension in the recovery phase of the arms. Other benefits include:



- **tapered neck seal:** this is not only watertight, but airtight too! That's right, you have to lift the neck seal to let air bubbles out of the suit!

- **SCS silicon coating:** the surface of an Orca suit has the best hydrodynamic properties of any neoprene. Wearing this suit I can complete a 25m length in 1.5 strokes (push-off, armstroke, legkick) - this may sound infeasible, but I assure you the *Apex2* just keeps on gliding!

- **grab panel on forearms** - a pitted surface that captures water during the armstroke. During the glide or freefall these panels are turned inwards, meaning they don't disturb hydrodynamics.

- **foolproof stitching & seams:** what other wetsuit manufacturer offers a warranty on their stitching and seam work? In 3 years I have yet to have a seam open or split, and we are talking delicate panels of 1.5mm neoprene.

The *Apex2* is a composite suit, made up of panels of 1.5mm, 3mm and 4mm neoprene, giving the benefit of weightless arms and legs but a warm core.

However if you are diving in very warm water (more than 27°C or 78°F) then I would recommend the *RS1*.

This is Orca's newest arrival, a suit made entirely out of 1mm neoprene. With the *RS1* you benefit from the hydrodynamic properties of the SCS coating, but with an almost zero buoyancy suit. Water can enter to a certain extent through the stitched seams, but I find this prevents overheating in dynamics or in the excessively warm water of the Red Sea in the summer.



Hi Will,  
Could you please give me an advice regarding Orca suit? I'm just planing to buy Orca Apex 2 wetsuit for freediving, but I'm unsure about the right sizing, and don't have the possibility to try it out before the deal. Some webstores recommend to add 10lbs to your weight and than look in the siz charts, and if you are in the high end, than go up to the next size. Is this recommendation also valid to our point of view as freedivers, not triathlets? I'm 187cm tall, 88kg, and my chest is around 110cm. What do you think, which size should I choose, 9 or 10 maybe?  
Thanks in advance,  
Balázs

*by Balázs Horváth on 2008-11-13 12:32:29*

either size 8 or 9. I would probably go with the size 8, as they are best when they are very tight (it won't limit flexibility). I am 185cm, 102cm chest and 75kg and I wear a size 7.

*by will on 2008-11-13 12:39:24*

Thanks Will for introducing me to the idea of this kind of suit for freediving - takes my research for the perfect suit to a new level! But I am confused by one thing: on all the triathlon sites that mention the Apex2 they talk about its amazing "buoyancy properties" because it traps more air in the material than other suits - this seems the exact opposite of what we want as freedivers! I have been put off buying one of these so far because of this - can you sort out my confusion with an explanation? Is it still one of the most neutral suits around or is there something better?

*by Tom on 2009-01-20 07:00:55*

Hi Tom,  
The Apex2 has "air pockets" which are basically small chambers sandwiched into the neoprene in the chest panel. Tests comparing it to the Pflex2 (which had the same neoprene config but no air pockets) showed that after a couple of dives these chambers were squashed flat and there was no difference at all. Looks kind of cool though, with a dimpled surface, which may, like a golf ball, be more hydrodynamic.  
For the most neutral, high performance suit I would go with a 1mm Orca RS1, or a soon to be released Alpha.

*by will on 2009-01-20 07:17:40*

Balázs Horváth: Did You buy this suit? I`m 188cm, 109 chest, and 87kg, so if 8 suits You, it suits me definitely, but i have doubts, some sites recommend You to buy one size larger if You are high end of scale.

*by Matt on 2009-02-06 06:41:17*

and Will, how good is warm comfort for RS1 on a static training on a swimming pool?

*by Matt on 2009-02-06 06:42:56*

From the sounds of it you are a size 9. Chest dimension and weight are the most important measurements. I am 185cm, 100cm chest and 72kg and wear the 7.

*by will on 2009-02-06 06:44:31*

it won't keep you warm unless the pool is very warm (>30°C)

*by will on 2009-02-06 06:52:16*

Will, I`ve lost some weight and i took my measurements again. I`m 187/188cm, 106cm on normal breathe, and weight between 85/87kg. According to size guide should i get size 8?

*by Matt on 2009-02-10 17:13:54*

you might squeeze into a size 8, especially if that chest measurement was after a "normal breathe" (it should be taken after a passive exhale - like a sigh. I would say go with a size 8 yes - it will be tight, but that is best for performance.

*by will on 2009-02-10 17:33:04*

After passive exhale it`s 104cm,  
Can You tell me what suit gonna replace Orca RS1 FULL SLEEVE? Because in all Europe shops it is on clearance, and I can get size 8 nowhere. I know there is Alpha coming up but it`s 3-4x times more expensive.

*by Matt on 2009-02-10 17:59:18*

There should be a 1mm Alpha coming out. I don't know what the retail price will be compared to the thicker Alpha. Try looking in UK shops for size 8 RS1's

*by will on 2009-02-10 18:36:14*

Just curious... Anyone using a Orca 3.8 for freediving? Pros/cons? Thanks!

*by Robert on 2010-01-02 13:42:09*

The 3.8 has more buoyancy than the other suits. Good for triathlon, but disadvantageous for freediving.

*by will on 2010-01-02 20:11:08*

hey guys, I'm so pleased i found this, I've been wondering for weeks about triathlon suits for freediving! I live in florida where usually one wears a 1.5 mm scuba wetsuit year around except in winter, what thickness should I get? are these suits warmer than scuba/spearfishing suits? also what would you recommend? a two piece since it has no zipper i guess? I've been looking for de soto since they seem to be less expensive ,, thanks for the help

*by Carlos on 2010-02-24 15:06:58*

for winter diving a 2 piece is normally better. The Orca suits are warmer than regular 2mm suits, as they are a lot more anatomically cut and adherent.

*by will on 2010-02-24 19:12:50*

Thanks Will, i've been looking but can't find the RS1 or apex at an affordable price(apex), I found the equip, and the equip lite(i read it was good for freediving)??or the S2 are these good? I've been freediving for about a year but now I want to take a course. Thank you for your time.

*by Carlos on 2010-02-27 13:41:21*

I'm hoping people find the following useful : I am 1.88m, 89kg, 106cm chest. I bought the Orca Breathe, size 8. I couldn't get in and zip up on the first 3 tries, it felt way too small. On the 4th try I finally zipped up in the shower, but it felt incredibly tight. I regretted not buying a size above but I didn't have time to return the wetsuit before my trip to thailand. When I got there, I jumped in the water and the wetsuit felt PERFECT. It's like a second skin. Tight, but breathing is easy. Legs could be a little longer on me, but that's ok. I highly recommend following the size chart on the Orca web site, it worked for me. They do run small, but they feel great once in the water.

*by Pierre on 2011-08-27 15:56:16*