

The HangLine

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A Different Approach to O₂ Control

By Bill Nadeau

*The Earth is not flat and
the 2 cell approach
probably works.*

On what has been referred to as a radical and unique design, the new Discovery Mk VI Rebreather by Poseidon is catching a lot of people's attention. When Cis-Lunar launched it's MK 5 Rebreather back in 1998 it became an instant sensation in the diving community. For the first time ever, a state-of-the art fully automatic breathing apparatus was available for long dives and built with the safety and ruggedness needed for advanced cave exploration and technical diving. And we dare say, no one has yet, nearly 10 years later, matched the performance of the MK V. The new fully automatic Mk VI Discovery Rebreather is designed to give sport divers the ultimate diving experience without all the technical complications. Forget everything you might have heard about PO₂, scrubber life and oxygen cells - this design is challenging all traditional philosophies on Rebreather infrastructure. The compact combined mouthpiece makes going to open circuit as easy as just flipping a switch and acts as

an ADV. Forget about multiple sensors and the confusing complexities of voting logic. This unit offers continuous calibration and real time monitoring of oxygen and CO₂ issues. Post dive procedures are as simple and safe as open circuit (well almost). It is small, functional and very cool.

Okay - that is a great selling job. But let's talk about the design. Bill Stone has to be, by far one of the brightest most ingenious designers in the world and a very dynamic individual - just check him out on 'Ted Talks'. In addition to being featured in National Geographic his accomplishments can be found recorded any reputable magazine or journal in print. His old company Cis-Lunar (**which literally translates into "on this side of the moon" or "not beyond the moon"**) was only the beginning and the website for his current company, Stone Aerospace, provides an itinerary of the most advanced exploratory equipment used in inner and outer space.

But does Dr. Stone's reputation and dog and pony show distract us from making educated and unemotional decisions about this technology. Blind faith - we usually accept it when we **a)** want to believe something is true and **b)** to lazy or





uneducated (or both) to challenge it. Don't get us wrong - this new unit has us all goose-pimply and excited but let's analyze the Mk VI CCR and the 2 cell approach with the due process it deserves. Again this article is NOT about the new MkVI from Poseidon/Cis-Lunar. It is about entertaining new theories in Rebreather technology (well any new technology for that matter) with a fair and objective mind set.

measures everything from battery capacity to tank pressure, from oxygen level to atmospheric pressure and depth.



There is not enough Gigabytes on our server to present all the issues at hand to thoroughly discuss this

technology nor are we informed experts on this subject matter. But we do have fun with it none-the-less. Let's start with the **'White Papers'** drafted on this technology. It reads very well - too well in fact. A professionally written, academically sound scientific thesis on the 2-cell approach to CCR designs. This document wins - right up until the end, where it then turns into a brochure for Poseidon. Shame really.



Subsequently it injects precise amounts of gas to keep the right mixture for every depth. We have to admit it's simplicity is attractive and tends to make you want to believe this is solidly developed technology.



Why is the MK VI control system unique? Poseidon alleges that the continuous calibration of sensors enables you to always trust the reading of all sensors and the

resource management system measures your gas consumption throughout the dive and guides you to ensure that the available gas always is enough to reach the surface. These vital electronics are covered in oil to ensure there is maximized protection {theoretically}. The control system

We like simplicity. Surfing the Rebreather sites we found a lot of experienced divers liking this new 2-cell stuff. The debates go on and it appears true; the Earth is not flat and the 2-cell approach probably works. But who wants to go first?

Honestly? – I'm pretty friggin tempted.

~Safe Diving

