

HOW TO FIT AND USE A KIRBY MORGAN SUPERMASK M-48 WITH A REBREATHER

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It has been just over a couple of months that I use the M-48 Full-face mask made by Kirby Morgan. I ordered it a few weeks before the Yamashiro Project dives in the Philippines (see www.cedricverdier.com/yamashiro.html) and I needed a few dives and improvements in order to be fully satisfied with it. I used or tried quite a lot of Full-Face masks in the past (Ocean Reef, KMB, AGA, etc) but it was the first one I use with a rebreather, mainly because of its unique design: it's made of 2 separate compartments, the upper one being an almost standard face mask, the lower one being a dry detachable compartment with a mouthpiece. One can remove the pod and breathe from another mouthpiece underwater, without having to remove the entire full-face mask. This is the only FFM I'm aware of that has this feature, a very interesting one for a rebreather diver.



Benefits

When I saw this mask for the first time, during a cave dive with another rebreather diver (DrMike), I was surprised and interested. I had the feeling that this mask could have a lot of benefits for the type of dives I normally do:

- Warmth. The face is entirely dry, a very important benefit for cold water diving, or very long decompression hangs.
- Protection against marine life and pollution. During wreck dives, I often have lots of jellyfish that have the bad habits to drift directly onto my face during deco. No more a concern with a FFM.

- Less risk of loosing the mouthpiece. If one passes out underwater, because of convulsion or hypoxia for instance, the risk of drowning is maybe not eliminated but at least clearly decreased.
- Difficult to be lost or dislodged. One of the most frequent reasons why people partially or totally flood their loop is because of their mouthpiece. The lips are not properly sealed, they loose their mouthpiece or it's simply dislodged by a fin kick. Not possible anymore with a FFM, except if you use a crowbar and a cutter...
- No jaw aches. No need to keep biting the mouthpiece at all time, so it's possible to temporarily remove the mouthpiece from the mouth and relax the jaw during long/deco dives. A study made by DAN Europe shown that a long jaw contraction can provoke headaches.
- Communication. Temporarily removing the mouthpiece from the mouth can also help to better speak underwater. And some underwater communication devices are available.
- No need for a back-up mask. Because of its unique design, the m-48 doesn't have to be removed to go OC. So no need to go OC "blind" and quickly look for the back-up mask in a pocket mask in case of bail-out. Simply close the DSV, remove the pod and put a reg on. That's it! It's even easier if you use a BOV like the Golem Gear or the Kirby Morgan.
- It looks cool!



Disadvantages

Obviously a FFM is not a perfect tool; otherwise every diver would have one. There are some disadvantages and it's always better to know them before making any purchase decision.

- Price. A FFM (specially this one) is a little bit pricey. At least more expensive than a standard half-mask. You can also use a BOV (Bail-out valve) and it becomes even more expensive. The BOV made by Kirby-Morgan (a.k.a. "the NATO Pod") is not only outrageously expensive but also extremely difficult to find (for the military market only!).
- Time to be used to it. Any diver, regardless of their experience, needs some time before being fully comfortable with a FFM, even if the m-48 is supposed to be easier. The field of vision is restricted and the whole mask is bulkier. And you need to learn some new techniques in order to remove the pod or to clear the mask.

- Size. The m-48 comes as a one-size-fits-all. The only possible adjustment is with the straps. I'm not sure that it will fit a small face.

Some problems to fix

I use the M-48 with a Megalodon CCR but it looks like it could be used with any kind of rebreather (SCR or CCR). Nevertheless I found a few things that needed to be changed or adjusted.

- Mouthpiece. The KM mouthpiece is quite small and uncomfortable: it can be replaced by a Jax or Seacure customable mouthpiece. As the pod is far from the mouth, it tends to push the mouthpiece forward, making it difficult to maintain in the mouth during a long dive: 2 bungee loops on the DSV will keep the pod closer to the breathing hoses.



- HUD. The field of vision is quite small. On the Meg (and other rebreathers), the HUD is difficult or impossible to see: a longer HUD holder is necessary.

- DSV. Because of the location of the bottom purge on the mask, the DSV can be difficult to close: the stem on the purge can be cut. A BOV is also a good solution to this problem.



- Mask Clearing. There could be some water in the mask: the upper compartment is easy to clear (same technique than any other half-face mask). The lower compartment needs a specific technique (pinch the exhalation hose, remove the mouthpiece and exhale through the mouth). The real problem with this is it takes 2 hands when they may be needed for something else.

- Equalisation. The nose pocket is quite big if you don't have a French nose, so ear equalisation could be less convenient to do: you maybe have to use 2 index fingers instead of only one hand, or adjust the breathing hose and the HUD to allow for an easier access to the nose.

Once all these small problems are fixed, you can really enjoy all the benefits of this FFM. I found it a very convenient way to dive and it's now permanently mounted on my CCR, so I use for any dive, even the shallowest/shortest ones.