



# Rebreather Intro

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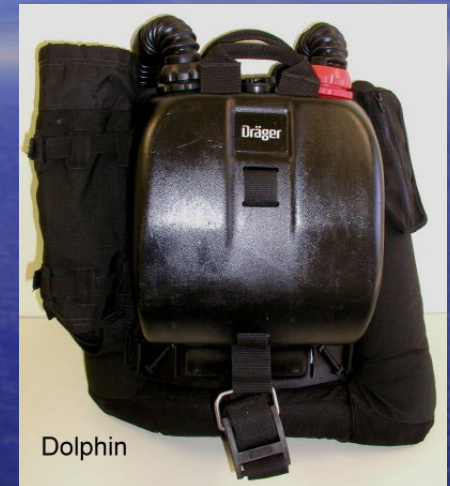
Nothing can fall off the deck

# Rebreather Intro

- Overview of the common types of rebreathers found in the UK
- More in-depth look at one of the most common CCR's the APD Inspiration

# Type's of rebreathers

- Semi Closed Rebreather (SCR)
- Nitrox continuously added through an orifice.
- Gas continuously released from unit (small stream of bubbles).
- Depth limited by O<sub>2</sub> in gas, generally not used for trimix diving.
- Very little or no deco advantage over OC
- Big gas saving over OC



# Type's of rebreathers

- Closed Circuit Rebreather (CCR)
- Manual or computer controlled
- Very little gas used
- Big deco advantage over OC
- Big gas saving over OC
- Depth limited by own stupidity (when using trimix)



# Rebreather models

- SCR's
- Dolphin
- Ray
- Azimuth
- CCR's
- KISS
- Inspiration/Evolution
- Megladon/mini Meg
- Oroboris

# Why do people use rebreathers

- Silent – Up close to marine life
- Challenging diving – Not a strap it on and jump in bit of kit.
- Far less gas consumption and deco on deeper dives

# Deco advantage

- Dive to 36m for 30 min
- Air – 77min
- Air + 50% from 22m - 55min saving 22 min
- CCR - 41min saving 36 min
- Pro Planner 0% safety 100% deep stops

# How does a rebreather work

- A sealed loop, which comprises of
  - YOU – air pump
  - Scrubber
  - O<sub>2</sub> monitoring – manual or computer controlled
  - Method of O<sub>2</sub> injection – manual or CC
  - Counterlungs
  - Diluent injection – manual or Automatic

# Brief for OC Dive Buddies

- PRE-DIVE CHECKS – Unique CC start up routine
- ON THE SURFACE – In any problem, once back on the surface the CC diver should be treated the same as a OC diver
- UNDER WATER – Buoyancy, Bubbles, Busy

# Brief for OC Dive Buddies

- THINGS AN OC BUDDY SHOULD KNOW – How to open and close a CC mouthpiece, O2 and Dil buttons. Symptoms of Hypoxia, Hyperoxia and Hypercapnia
- DIVE MARSHAL LOG – Essentially the same as an OC diver. Extra info is O2 contents, Diluent contents, scrubber duration and PO2 set point

# Bailout to OC

- If you see me bail out to OC, stay close but leave me alone. Don't hinder me.
- If you see me go back on to the loop, as above.
- If you see me on OC, I'm OK, but off to the shot, Stay close I won't be waiting around.
- If on OC at the top of the shot, screen and HUD flashing, alarm sounding. I will still complete all required deco stops.

# Emergency Rescue of an Unconscious INSPIRATION Diver

**DO NOT** remove the mouthpiece.

- Flush the unit with diluent (BLUE button)
- Carry out an assisted ascent
- If diver recovers consciousness an assisted ascent may still be required