

A Diving Helmet from a Water Heater

Air for the diver is supplied from twin bellows.

THEY go down to the sea in old water heaters along the Atlantic coast these days, now that some young man with a leaning toward aquatic sports has proved how easy it is to make an excellent diving helmet from a metal water heater which will enable its wearer to walk comfortably on the sea floor 35 feet and more below the surface. A few feet of garden hose, two pairs of bellows, a couple of valve boxes and a cylindrical metal boiler of the type used in most homes for heating water, are the essentials for building one of these helmets.

Perhaps the most important part of the whole apparatus is the bellows arrangement which furnishes air to the diver. Two bellows are required, operated alternately to furnish a steady stream of air. This air goes through two valve boxes which prevent its return, and it is forced down into the diving helmet and out around the diver's shoulders. A pressure of fifteen pounds per square foot is all that is required at ordinary depths, and this the bellows will amply supply.

Four boards 12 by 24 inches are required for making the two bellows. Cut these to the pattern as shown, and in two of the

18 DIVING EQUIPMENT



Completed water-heater diving helmet.

boards drill a pair of one-inch holes to admit air. On the inside of the board, covering the holes, tack a piece of chamois by its four corners to act as a valve.

Gores for the bellows are cut out of leather in accordance with the printed pattern. Moderately thin and very flexible leather should be used, of the type which is usually found in shoe uppers and which your local shoemaker can supply. Prolonged soaking in soapy water will increase the pliability of the leather. Apply a generous amount of cold water glue to the edges of the bellows boards and tack the leather in place with brass headed upholstery tacks.

A tin snout is used at the end of the bellows to make a connection with the garden hose which is used as an airline in this diving apparatus. The hose is, of course, tightly secured at the connecting points with clamps or wire wound tightly around the outside. Construction of the valve boxes is

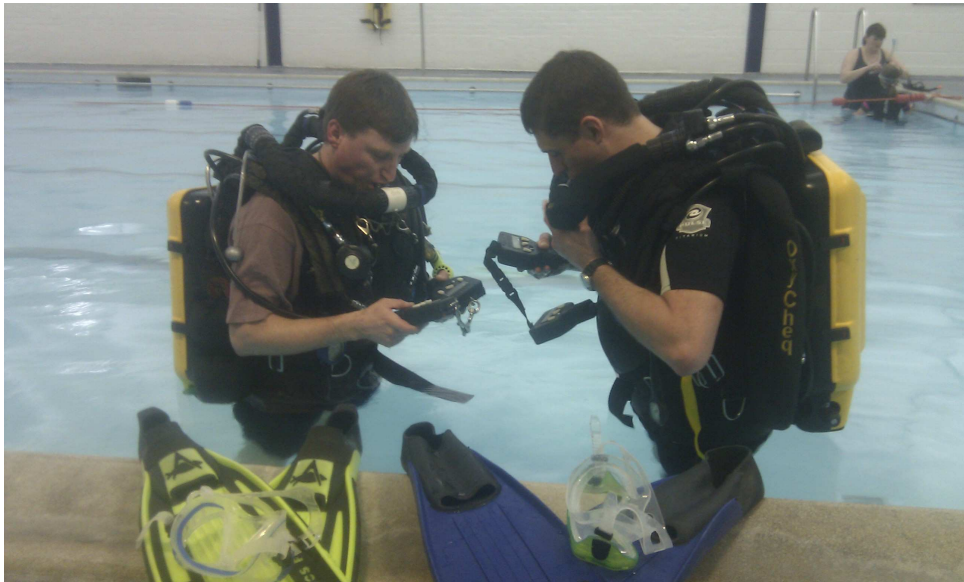
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Tony Hodge's Tee-Shirts
Anyone wants to order one?



Yes I'm training Chris Butters on his Inspiration classic rebreather.

I'll outline what the training involves.

Pre-requisites are:-

BSAC member
over18
50+ dives
BSAC sport diver or equivalent
BSAC Advanced Nitrox or equivalent

Photos by Ron Rookledge
Story by Andy Dowsland

Above water, there's 9 theory lessons and 2 practical workshops which include preparing the unit to dive and a maintenance session. Students have to complete 120 minutes of sheltered water training time, which I'm doing in the pool with Chris, this should take about 3 sessions.

There's 26 skills to go through in the sheltered water sessions, including maintaining minimum volume of the breathing loop, bail out practice, mastering the electronics and monitoring and buoyancy control, which is a skill that needs re-mastering as the breathing loop affects buoyancy control different to open circuit diving. We also practice controlled buoyant lifts again.

After the sheltered water lessons there's 8 open water dives which work on skills and progressively build up depth to 25m. The final dive is an assessment dive. The open water dives will for example involve a minimum of 1 trip to Blue lagoon and probably 3 days at somewhere like Stoney cove.

Oh and there's a Theory exam also.

On completion of the course, providing the instructor is confident and satisfied that the student is competent with the unit, the diver can then do dives up to 40m using air as a diluent in the rebreather and up to 15 minutes of decompression stop time. They have to dive with a sport diver or above and also to progress their depth with an experienced rebreather diver.

So the course involves a lot of commitment both from student and instructor.

Cost: The course is run as a regional course, currently the student pays £450 for the course and that includes the student manual. The instructor then sends an expenses claim to the regional organiser and anything left will go back to the student.

HULLO is the newsletter of the Hull Branch of the British Sub-Aqua Club.
Please send your contributions to the Editor - Don Wilson - don@poorlyleg.karoo.co.uk
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