

WELL AND TRULY TESTED



Lighting has come a long way in a short time, and shining some of the latest LEDs can threaten to fry every fish in sight – something NIGEL WADE really doesn't want to do

DIVE LIGHT ORCATORCH D620 CANISTER LIGHT



NOT TOO MANY YEARS AGO, I purchased a German state-of-the-art umbilical dive torch. It featured a high-intensity gas discharge tube (HID), delivering what was claimed at the time to be the highest light output on the market and, with a huge bank of nickel-metal hydride (ni-mh) batteries, boasted a "whopping" burntime of 60 minutes.

I can remember cringing when I parted with just under a grand for this torch, but it served me well for more than a few seasons of deep, dark technical diving.

Alas, today this monster of a torch is gathering dust in my workshop. Why? Because that 60-minute burntime and 300 lumens of light it delivers is so yesterday.

Today we can enjoy torches with smaller battery-packs providing long-lasting power to LED light-heads that deliver lumens stretching to four or five figures.

UK distributor Sea & Sea sent me a torch to put through the **DIVER Test** treadmill that on paper would leave my old HID model floundering in the dark.

The Design

In today's vernacular, the D620 is called a canister light. In days gone by it would have been referred to as an umbilical light, because it has a separate battery container connected to the light-head by 45cm of waterproof

electrical cable.

The D620 is powered by four rechargeable 18650 li-ion batteries housed in a 113 x 54mm-diameter aircraft-grade aluminium canister with a diamond-grade, hard-anodised seawater corrosion-resistant finish.

Its screw-down head is sealed with twin O-rings to provide a depth-rating of 150m. The battery canister has a built-in slot for belt attachment.

The lamp-head is built from the same hard-coated aluminium alloy. It is 83 x 50mm in diameter and houses a single Cree XHP70 LED nestled in a polished aluminium-alloy reflector. This sits behind an optically coated 4mm-thick disc of toughened glass.

A single switch operates the torch, with 90° rotation needed to unlock it and single pushes to turn it on and scroll through its three power levels. The lamp-head is supplied with an

adjustable, rotary Goodman handle, built from the same spec of alloy as used throughout the rest of the torch.

Choices of orange or grey silicon shock-rings are provided with the lamp-head to add some impact resistance. The D620 comes in a PVC carry-case with cut-out foam inserts to house the supplied light, Goodman handle, battery-charger with both mains 240v and car 12v adapters, a wrist lanyard and spare O-rings.

The polished alloy reflector provides a beam that has a bright 14° central core with a softer 78° peripheral profile. The single Cree LED delivers a maximum of 2700 lumens of white light at an intensity of 16870cd over a maximum distance of 260m (on land). At this setting it is claimed to have a burntime of 2.5hr.

Further settings provide 800 lumens (medium) with a corresponding burntime of 8hr 50min, and a huge 37hr at its lowest setting of 150 lumens.



The locking switch.

In Use

The first thing to strike me was the excellent build quality of this Chinese-made light; its robust construction and beautiful anodised finish seemed to ooze class.

After charging the batteries fully, I took the OrcaTorch D620 to Wraysbury Dive Centre for its initial underwater foray.

Wearing dry gloves meant that the Goodman handle needed to be adjusted to allow for the extra bulk. This was easy to do, but required an Allen wrench to loosen the stainless screws to increase the width.

The handle's depth can be increased or decreased using three pre-set cut-outs, and is locked in place by tightening a stainless thumb-screw. The handle can also be rotated through 90° for ease of storage, and to provide protection to the glass lens when travelling.

The battery-pack was threaded onto the BC waist-belt, and we were ready to go. The Goodman handle positions the light-head steadily and securely on the back of either hand (depending on the user's preference) but the fingers and thumb remain free to perform tasks such as purging regulators or dumping gas from the BC.

The adjustable handle can also be removed, if a handheld light is your thing.

The light-switch was very accessible and easy to use. A single push turns it on at its highest output, and subsequent short pushes scroll through the remaining power settings of medium, low and off.

This preset sequence quickly became an annoyance, as I had to switch the light off before going from low to high outputs.

A 90° turn locks the switch for travel or to stop accidental switching under water, and this task was easy to perform under water, even in drygloves.

The beam was spread over a wide angle, with its tight central hotspot cutting through the water like a hot knife through butter.

At its highest output, it seemed as if it would melt rock – 2700 lumens is incredibly bright, possibly too bright for normal use, but there's the option of two lower light levels from which to choose.

I preferred the middle setting at 800 lumens, which didn't illuminate the scene as if it was Stamford Bridge on match night, and in reduced visibility didn't give the impression of driving at night on full beam in fog.

It also had the advantage of substantially

increasing the remaining battery life.

On subsequent dives I tried different mounting positions. I secured the canister onto the BC's tank camband strap, and also placed it in a pocket with the zipper closed until only the connecting wire protruded.

Both proved to be good options, but my favourite was to place it close to my hip, attached to the waist-belt.

Conclusion

This style of dive-light may not be for everyone – indeed, with dive-torches getting smaller and smaller, they can nearly all be easily positioned on the back of the hand using neoprene sheaths and mounting plates instead of bulky Goodman handles.

I like the solid feel of the Goodman system, and am also a big fan of canister (umbilical) lights. The batteries needed to power these amazingly bright lights are still a bit bulky, but by placing them in a separate container the light-head can remain compact yet pack a punch, with unheard-of outputs and burntimes being achieved.

When I compare this modern D620 LED dive-light to my old German umbilical HID model with its enormous battery tube and once-upon-a-time top-end output, I'm reminded of just how far the light-technology juggernaut has moved forward in such a short time. It's like comparing candlelight to sunlight. ■



The light with the Goodman handle in use.

SPECS

PRICES ▶ £300

MATERIALS ▶ Hard-anodised aircraft-grade aluminium

LIGHT SOURCE ▶ Cree XHP70 LED

OUTPUTS ▶ High 2700, Medium 800, Low 150 lumens

BURNTIMES ▶ High 2hr 30min, Medium 8hr 50min, Low 37hr

POWER ▶ Four rechargeable 18650 li-ion batteries

SWITCHING ▶ Single, lockable sprung push-button

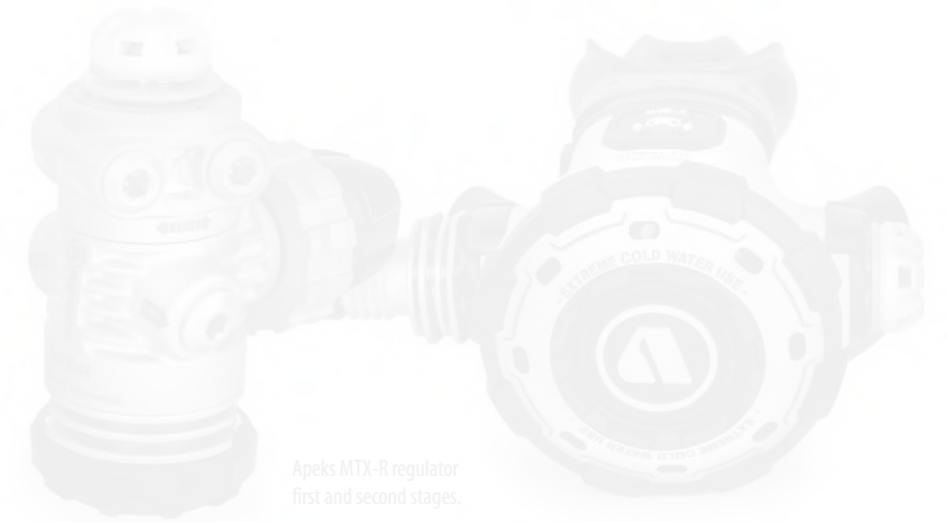
SIZE ▶ Canister, 113 x 54mm dia. Head, 83 x 50mm dia (without handle)

WEIGHT ▶ 1.1kg with handle and batteries

CONTACT ▶ www.sea-sea.com

DIVER GUIDE ★★★★★★☆☆

REGULATOR APEKS MTX-R



Apeks MTX-R regulator first and second stages.

IT HAD BEEN A REALLY COLD WINTER, the grey sky producing sustained snow, but the air temperature had risen a few degrees over the past week, causing the thick ice covering the

surface at Wraysbury to all but disappear. Chilly meltwater infused the lake, and dropped the temperature to a bitter 3°C.

Dive-centre owner Richard Major and I were