

WELL AND TRULY TESTED



NIGEL WADE was always impressed by Scubapro's big regulator combo, but when he gets hold of the first titanium version in the UK, his expectations are sky-high...

REGULATOR

SCUBAPRO MK25 EVO T/S600 TITANIUM



IN THE NOT-TOO-DISTANT PAST, regulator performance was almost a hit-and-miss affair. Some models could leave the user struggling to get a breath at depth, while others over-delivered to the extent of causing gas-wasting freeflows.

CE certification has mainly put a stop to these scenarios, with all modern underwater breathing apparatus having to pass stringent tests before being awarded a CE mark, allowing it to be sold in European markets.

With regulator performance now seemingly standardised, makers have been striving to advance this humble but crucial bit of dive-kit using new technologies and materials. One such material is titanium, an amazing alloy but difficult to use in the fabrication of regulators.

Scubapro has recently evolved its flagship MK25 first stage using this tough alloy, partnering it with a revamped S600 second stage with titanium accents.

I managed to get my mitts on the first model in the UK for a **DIVER** Test exclusive.

The Material

Titanium alloys are metals that contain a combination of titanium and other chemical elements; the most common version adds in 6% aluminium and 4% vanadium (Ti-6AL-4V).

The resulting metal alloy has an extremely high tensile strength, is very light in weight and has exceptional corrosion resistance, especially in sea water.

The disadvantage is that it requires special tooling and machines, as it is difficult to produce and fabricate, so this exotic metal carries a huge price-tag.

The First Stage

The MK25 EVO Titanium has an air-balanced flow-through piston designed to provide constant and effortless airflow that the designers say is unaffected by depth, tank pressure or breathing demand.

It is coldwater-compatible with Scubapro's extended thermal insulating system (XTIS), which isolates the mechanical components from coldwater environments. Resistance to freezing is claimed to have been increased by up to 30% compared to a standard MK25.

The XTIS integrates an insulated coating on the main spring, insulating bushing on the body, an antifreeze cap, and a bigger body and cap thread.

Externally, the first stage has supplementary fins machined into its body to provide an extra thermal exchange and enhance its coldwater compatibility. The key insulating-system components have been given a blue coating.

The turret-style first stage swivels, and has two high-pressure ports fixed either side of the main body and four low-pressure ports on the swivel portion, with an additional fifth lp port at the tip to further streamline hose configurations and enhance versatility.

There is also an external intermediate

pressure adjustment for use by service technicians, so there's no need to disassemble all the components to adjust performance.

The first stage comes with either 232bar International or 300bar DIN connections and weighs in at 232g (International version). That is more than 300g lighter than the equivalent standard brass-bodied MK25.

The Second Stage

The T/S600 is an evolved S600 second stage with inserts, trim-ring and interior barrel made from the same titanium alloy as used in the first stage. It features a metal valve-housing and is air-balanced to reduce inhalation effort when diving at varying depths and tank pressures.

The T/S600 has two user controls – a diver-adjustable inhalation knob and a venturi-initiated vacuum assist (VIVA) dive/pre-dive switch.

The intermediate pressure hose is rubber, with an oversized bore to enable increased gas flow and subsequently higher delivery on each breath. The circular purge button is centrally placed on the front of the second stage and sports a titanium Scubapro logo embedded in synthetic rubber.

The T/S600 is finished with an orthodontic silicon mouthpiece designed to be comfortable and easy to grip without inhibiting gas flow.

In Use

I took the MK25 EVO T/S600 combination with me on a long-haul dive-trip to test it in challenging real-world conditions. The weight advantage provided by the titanium alloy was a bonus, especially going where airline excess-baggage charges could cost hundreds of dollars.

The first task was to decide on the hose layout. I was seeking the shortest route for each hose while obtaining the most streamlined configuration. The first-stage ports offered the ideal solution, placing gauge, octopus and lp inflator exactly where I needed them without creating any strain on the hose-joints, causing snag hazards or increasing underwater drag.

With a few dives done to ascertain that the regulator was performing correctly, I set about putting it through my standard array of micro tests.

First, I inverted myself to see if the second-stage diaphragm would let any water pass as I inhaled. It didn't let a drop in, allowing me to enjoy a totally dry breathe.

I then adjusted and re-adjusted the user controls. The inhalation knob was easy to locate, and I could position it to get the optimum delivery of gas for the conditions and my

SPECS

PRICE » £1079

FIRST STAGE » Air-balanced flow-through piston

MATERIALS » Ti-6AL-4V titanium alloy, high-grade polymers

PORTS » 5lp, 2hp

CONNECTIONS » 300bar DIN, 232bar A-clamp

SECOND STAGE » Air-balanced valve

CONTROLS » VIVA, adjustable inhalation resistance

WEIGHT » First stage 232g, second stage 156g

CONTACT » www.scubapro.com

DIVER GUIDE ★★★★★★★★

breathing rate.

I then spat the regulator out at depth. Some models instantly go into a freeflow when you do this, but the T/S600 just vented its trapped bubbles, then hung dormant by my side.

The purge-button was easy to locate and operate with a single finger. It was positive and progressive in operation, giving me total control of the gas-flow when purging unwanted water.

In reality I rarely had to use the purge, as the second stage proved watertight.

The orthodontic mouthpiece felt extremely

comfortable, and with the lightweight second stage feeling unobtrusive there was no need to bite down hard to keep it in place.

I can't remember noticing my exhaust-gas bubbles over the 15 dives I did with this regulator, though as every dive was spent facing into a surging current, perhaps I wouldn't!

Conclusion

If you're conscious of having a regulator in your mouth during your dives, it's probably because of poor performance, a wet breathe, over- or under-delivery of gas, or the fact that it's heavy, cumbersome or uncomfortable.

The best regulators almost fade into the background, allowing you to concentrate on enjoying being under water.

The MK25 EVO T/S600 Titanium did exactly that. I quickly forgot that I had a mechanical underwater breathing apparatus between my teeth beneath the waves.

I've dived with most of Scubapro's regulators over the years, and believed that the MK25 was the best first stage it had ever produced until I dived with this Titanium version.

The performance was outstanding, but when you add the advantages of this exotic alloy you have a regulator worthy of its flagship status – and possibly that hefty price-tag. ■



Scubapro Mk25 EVO T/S600 Titanium in use.