

# Excursion



Excursion is a combined closed circuit oxygen / semi-closed circuit nitrox Tactical Diving Life Support System that provides an operational diving capability beyond the safe depth and time exposure limitations of oxygen.

To switch to the nitrox gas supply stored in a separate pressure vessel (cylinder), the diver rotates a multi-turn gas switch-over valve that provides a constant mass flow of nitrox gas into the breathing circuit. Following a gas switch from oxygen to nitrox, the diver may descend to a maximum depth of 24m using 60/40 nitrox or to 30m using 50/50 or 40/60 nitrox.

## OPERATIONAL VERSATILITY

For shallow water operations using a Tactical Diving Vehicle (TDV) where mission profiles are required to extend beyond the typical four hour single oxygen exposure limit, nitrox gas located on the diver and / or on the TDV, may be used for extending dive profile durations beyond four hours. To support TDV operations, a bespoke dual flow nitrox gas switch valve may be used enabling the nitrox gas to be switched to low flow when on / in the TDV and high flow when undertaking free swimming.

## ENHANCED SAFETY

When in nitrox mode, for increased safety, to provide a means of monitoring the oxygen level within the breathing circuit, an optional Oxygen Partial Pressure ( $PO_2$ ) monitor may be fitted that can also be configured to supply decompression management data. Additionally an optional nitrox cylinder pressure alarm may be fitted which via a mask mounted peripheral display, provides a low cylinder pressure warning.



## CONFIGURATION OPTIONS

Excursion can be tailored to suit specific mission requirements via the use of the following accessories:

- Transport case
- Full face dual mode mask
- Bite mouthpiece and half mask
- Buoyancy compensation jacket
- Digicom through-water communications
- Dry suit inflation system
- Diver tool and test kit
- Maintenance tool and test kit
- 300 bar 2 litre non-magnetic composite cylinders
- 300 bar 3 litre low magnetic composite cylinders
- Spares package to suit customer requirements

## SPECIFICATION

Height	720mm
Width	430mm
Depth	160mm
Weight	11kg

## PERFORMANCE

Maximum depth (m)	30***
Canister duration (hrs)	4 - 6**
Air temperature operation	-20°C to +40°C
Sea temperature operation	-2°C to +35°C
Fresh water temperature operation	+1°C to +35°C
Pressure	300 bar cylinders

\* Dependent upon local oxygen exposure limitations

\*\* Dependent upon diver work-rate and water temperature

\*\*\* Dependent upon nitrox gas selected

## LOGISTIC ADVANTAGES

The unique multi mission capability of Excursion and the Shadow family of Tactical Diving life support systems offers reduced through-life costs and logistical advantages that include:

- A common platform reduces costs associated with training divers to use multiple life support systems
- Common spares reduces the spares inventory
- Common documentation / manuals
- Reduced maintenance
- Fully user serviceable