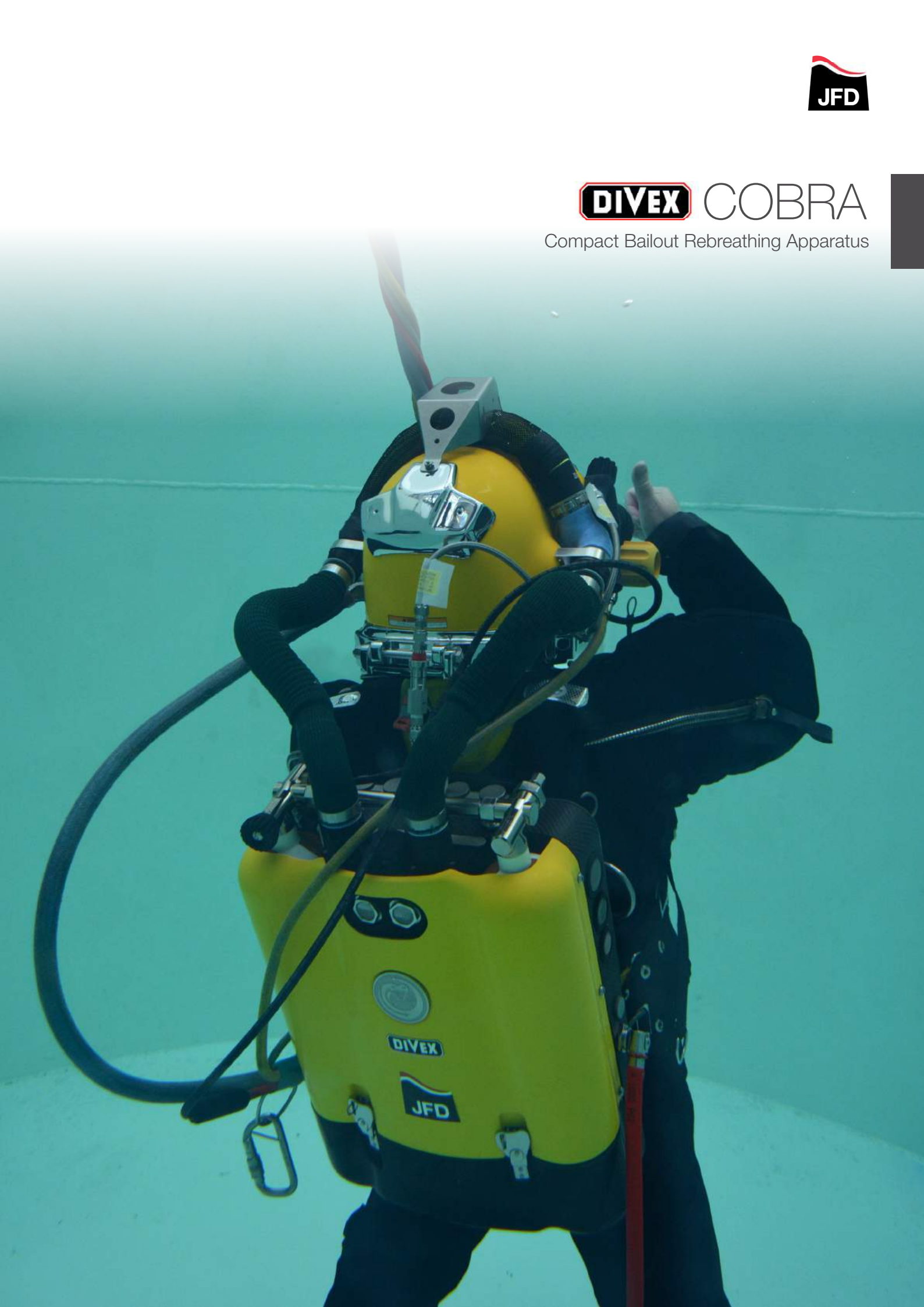
# DIVEX COBRA

Compact Bailout Rebreathing Apparatus



# DIVEX COBRA

## Introduction

The new COBRA (Compact Bailout Rebreathing Apparatus) set has been developed to provide a simple, highly reliable breathing system which will offer a diver up to 45 minutes of fully independent breathing gas to return to the safety of the bell in the event of an emergency.

Easy to operate and maintain, the set is completely mechanical and relies on no complex electronics for its operation. Like all Divex breathing systems the equipment is robust and reliable and has a very low work of breathing. COBRA is designed with the intent that the diver should be allowed to focus on his task in hand, knowing the life support is always there if required.

For the past twenty years, Divex has produced the SLS (Secondary Life Support) rebreather bailout system for commercial divers. The system has been adopted worldwide, providing divers with the assurance that in the event that primary umbilical gas is lost, he is able to switch to a fully independent breathing system which offers greatly extended duration over a “conventional” SCUBA - type open circuit bailout cylinder. There is now a recognition that an extended bailout breathing facility should be available to all divers, not only to those operating at depths greater than 200m, but also in the depths more common in the world’s oilfields - typically 50-200 msw.

Extended excursion umbilicals from bigger diving bells now mean that divers can be working some distance from the bell. The combination of cold water, darkness, subsea structures and a diver’s understandable alarm and disorientation can all contribute to delays in a successful return, not to mention other factors such as DP failure.

The Norwegian sector of the North Sea recognises this as a significant risk, and stipulates that a diver must have a minimum of 10 minutes of emergency breathing gas, calculated at a breathing rate of 62.5l/min. This renders the SCUBA approach non-conforming at depths greater than 56 metres. The same, or greater capacity, for divers should be available globally.

## Endurance

The figures below show the relative endurance, at 120 metres depth calculated using a conservative breathing rate of 40 litres per min.

| | |
|---|---|
| 7 Litre 300 Bar Twinset | 7 mins 25 seconds |
| SLS Mk4 | 30 mins |
| COBRA | 45 mins |

## Key Features


Up to 45 Minutes Endurance

1 Turn to Breathe

Low Work of Breathing


Max Depth 450 msw

## Investment & Development

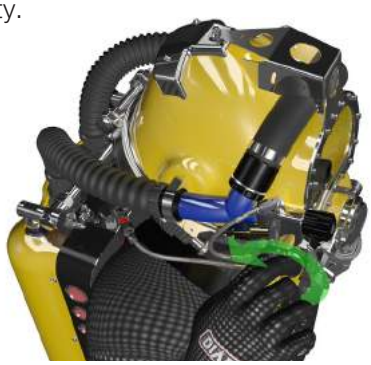
COBRA incorporates much of existing Divex technology which has been extensively proven in the military diving world. Additionally the COBRA set’s breathing performance complies with EN14143 and Norsok U101, and the COBRA set is currently undergoing rigorous testing for CE compliance. In common with the SLS Mk4, the new COBRA set incorporates:

- Scrubber hotwater jacket to ensure high CO2 scrubbing performance on actuation.
- Positive pressure when rebreather offline to maintain breathing loop integrity.
- Compatibility with KMDSI / Ultrajewel helmets.

## Advantages

Following significant diver feedback on the existing SLS, the new COBRA set has the following advantages:

- The existing SLS has a “parachute” operation, while the COBRA can be mechanically switched on and off by the diver as a pre-dive check.
- The COBRA counterlungs are completely encapsulated on the diver’s back.
- The COBRA uses as easy fill scrubber system for fast, simple change out of sodalime.
- Increased positive pressure feed to allow more rapid descent.
- Smaller than existing SLS Mk4 backpack.
- Composite or steel twin cylinders easily accessible for charging.
- Single turn activation and no counterlung “ripcord”.
- Safety indicator “rotowink” provides additional assurance of system positive pressure and hence integrity.





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