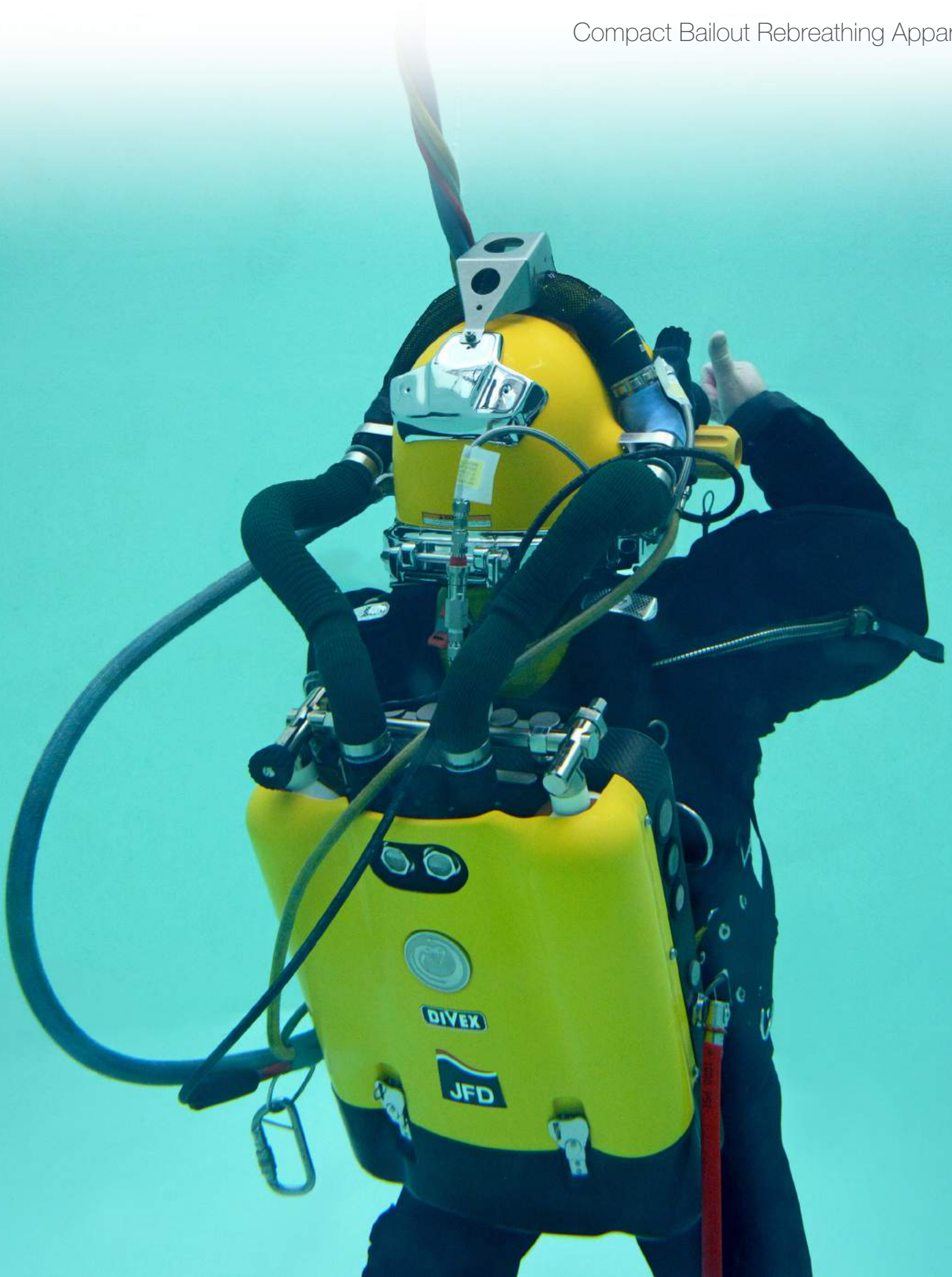




# COBRA

Compact Bailout Rebreathing Apparatus





## INTRODUCTION

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

COBRA is designed with the intent that a diver should be allowed to focus on the task in hand, knowing they can rely upon their emergency life support system in the event of a primary failure.

Easy to operate and maintain, this semi-closed rebreather is completely mechanical and relies on no complex electronics for its operation. COBRA is robust and reliable and has been designed to perform under the arduous conditions experienced in saturation diving such as extreme pressures, volatile gas mixtures and harsh environmental conditions.

## DIVER SAFETY

JFD pioneers state-of-the-art, customer specified commercial diving equipment which drives the continual improvement of safety standards for diving operations.

COBRA ensures all divers operating in any conditions have access to a greatly extended emergency breathing gas supply that affords them the best possible chance of survival if things go wrong.



up to 45 minutes  
endurance



up to 450 msw



semi-closed  
rebreather



## COMPLIANCE

COBRA incorporates existing Divex technology which has been extensively proven in the military diving world.

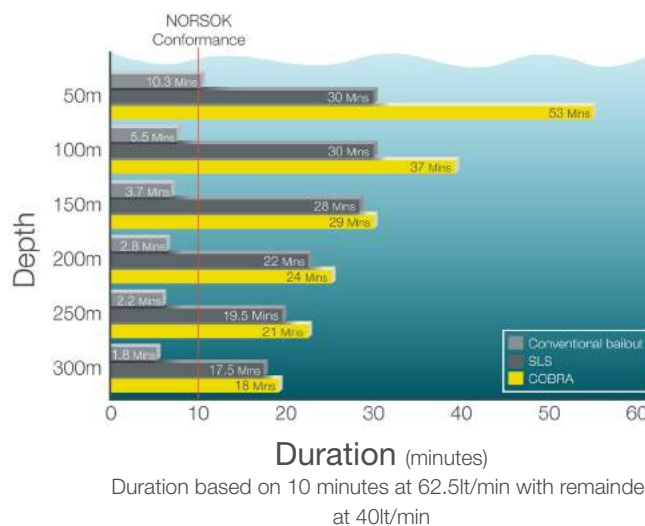
### BS EN14143:2013

COBRA meets the required safety, health and environmental standards to comply with EU legislation to the standard EN14143 making it the only fully certified deep diving emergency breathing system in the world.

### NORSOK U-101

COBRA also meets the relevant requirements of NORSOK U-101 and is able to satisfy NORSOK emergency breathing gas duration guidelines to 300msw.

Norwegian guidelines stipulate that a diver must have a minimum of 10 minutes emergency breathing gas calculated at a breathing rate of 62.5l/m which renders open circuit bailout methods non-conforming at depths greater than 56m.







## WHY CHOOSE COBRA?

For the past twenty years, JFD has produced the Divex SLS (Secondary Life Support) rebreather bailout system for commercial divers. The system has been adopted worldwide, offering divers a greatly extended duration over an open circuit bailout cylinder. However, there is now recognition that even greater duration is required as diving operations advance to depths below 200m and larger diving systems are installed containing extended excursion umbilicals.



**Weight**  
out of water: 26kgs  
in water: neutral



**Dimensions**  
width: 398mm  
height: 570mm  
depth: 171mm



**Gas Mixture**  
Heliox  
(dependant on depth)

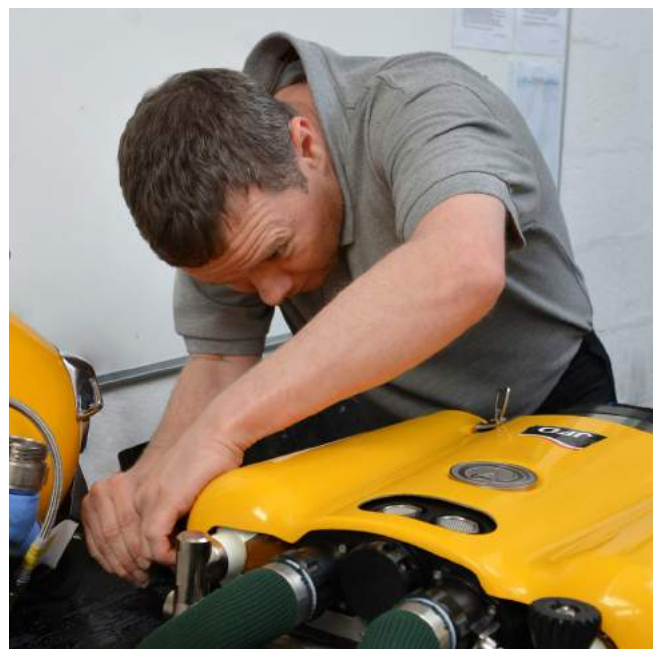


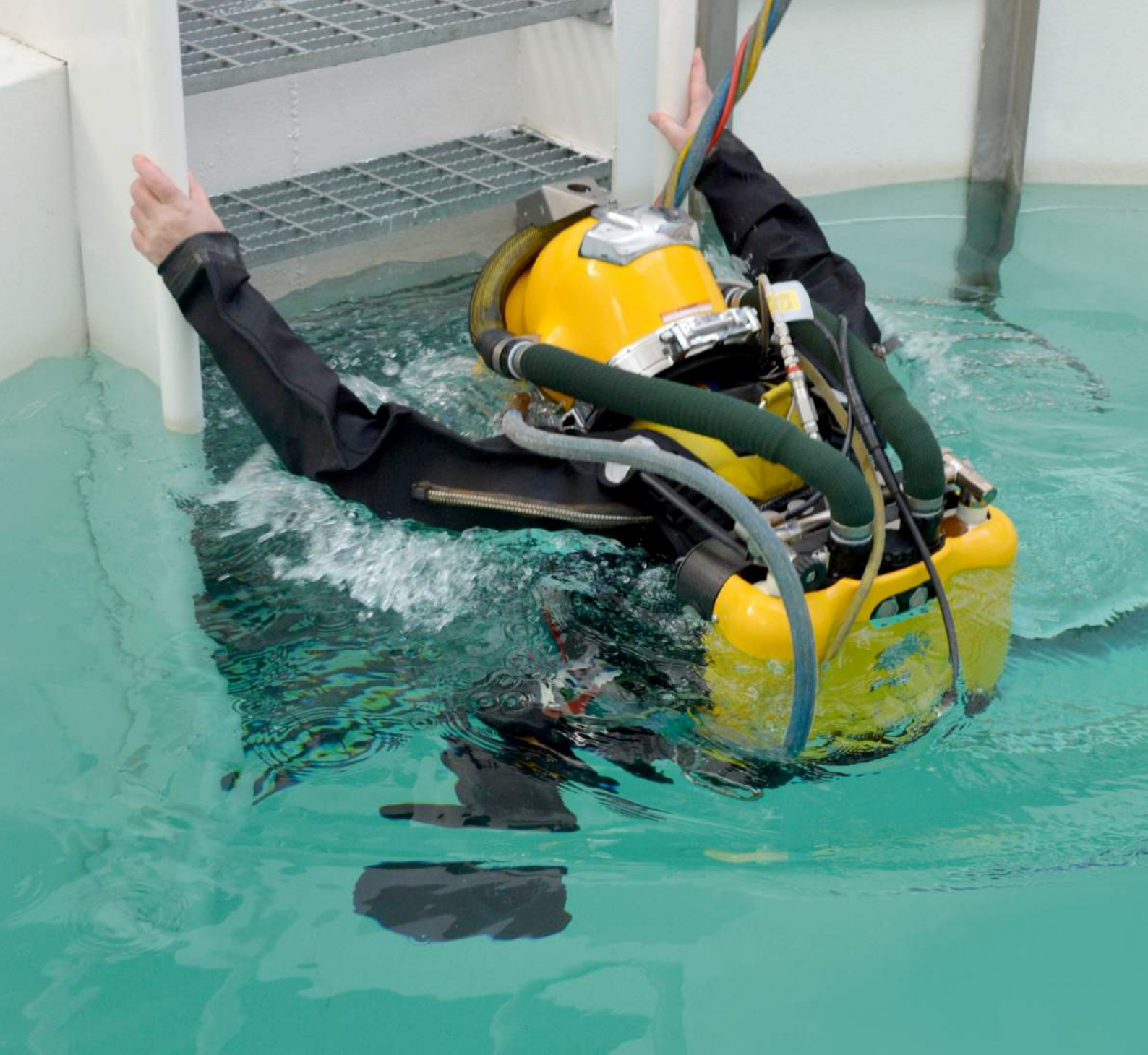
**Operating Temperature**  
seawater  
-1°C to +34°C  
freshwater  
+1°C to +34°C



**Storage Temperature**  
-30°C to +70°C  
(fully dried)

	SLS Mk4	COBRA
Scrubber hot-water jacket to ensure high CO <sub>2</sub> scrubbing performance on actuation	•	•
Positive pressure when rebreather offline to maintain breathing loop integrity	•	•
Compatibility with KMDSI/Ultrajewel helmets	•	•
Can be mechanically switched on and off by the diver as a pre-dive check		•
Single turn activation		•
Counterlungs completely encapsulated on the diver's back		•
Easy fill scrubber system for fast, simple change out of sodalime		•
Composite or steel twin cylinders easily accessible for charging		•
Increased positive pressure feed to allow more rapid descent		•
Safety indicator "rotowink" providing additional assurance of system positive pressure and hence integrity	•	•





## CAPABILITY

JFD has a well-established history in the development of advanced commercial and defence rebreathers, and has developed some of the most innovative systems which significantly improve diver safety within the saturation diving industry.





## TESTING

COBRA has been subject to rigorous testing throughout the development process assuring its capability and performance.

- Work of Breathing tested using a breathing simulator
- Operational parameters of breathing apparatus tested using a rig
- Environmental testing including gas mixtures, depth, temperature and wave form
- Conditioning testing including cleaning, disinfection, temperature and seawater resistance
- Functional requirements testing
- Hydrostatic imbalance
- Endurance testing
- Breathing circuit testing
- Inspired partial pressure oxygen levels
- Inspired gas temperature
- Helmet and body harness testing
- Practical performance testing



Low Work of Breathing

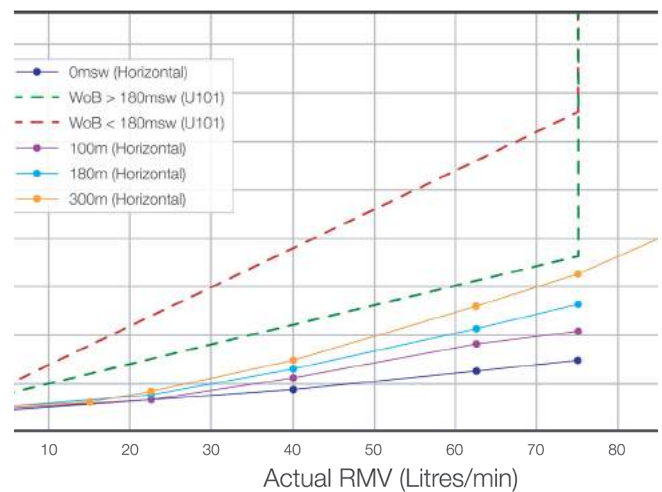


Single Turn Activation



## LOW WORK OF BREATHING

COBRA CE Marking Work of Breathing



## SINGLE TURN ACTIVATION

A single turn activation on and off means divers can test the set before leaving the stage as part of their pre-dive checks - providing a significant safety advantage over previous 'parachute' systems.

## TRAINING

JFD offers a full range of training courses to suit a variety of roles and requirements. It is strongly recommended that all personnel undergo familiarisation training as a basic introduction and understanding of the equipment. JFD also offers more advanced courses specifically relevant for supervisors and technicians.

Courses run from the JFD facility in Aberdeen benefit from access to an indoor training tank and custom built lecture facilities however courses can be scheduled anywhere in the world.

### 1 & 2 DAY COURSES

#### FAMILIARISATION

##### 1 Day

This one day course combines theoretical familiarisation elements with a practical training session designed for divers and supervisors who will be using the equipment on a day-to-day basis.

Delegates will be given the opportunity to use the equipment within the safe and controlled confines of the JFD dive tank, as well as taking part in a more in-depth classroom session learning about technical features and functions.

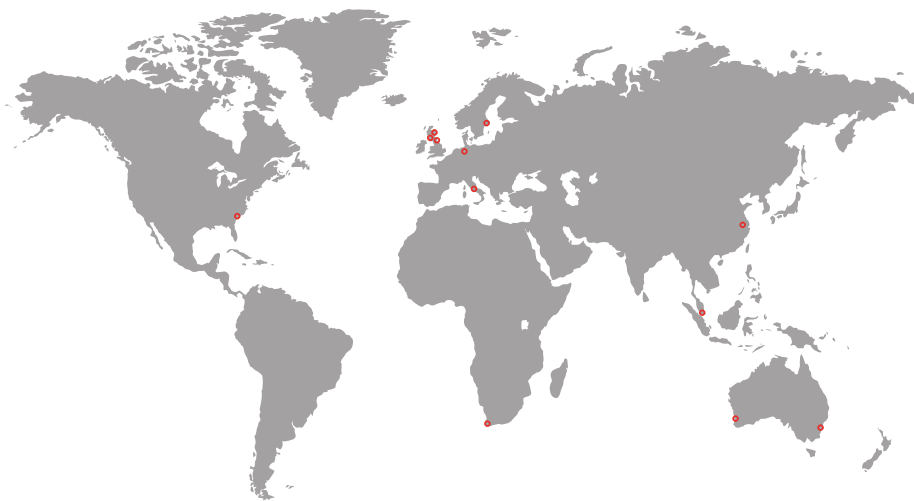
#### MAINTENANCE

##### 2 Days

This two day course has been specifically designed to provide technicians with detailed theory and practical sessions giving them the skills needed to competently build and maintain the system.

Upon successful completion of the course, each student is issued with a certificate of training which is valid for 3 years. Renewal courses are available on request assuring that standards can be easily maintained.





Aberdeen | Bremen | Cape Town | China | Glasgow | Newcastle  
Perth | Portsmouth | Singapore | Stirling | Sydney | Vaxholm | Virginia



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