



Making Scuba diving safer

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Making scuba diving safer

A consumer's guide to the British Standards for recreational scuba diving, and for the training of recreational scuba divers

Scuba diving – swimming underwater with special breathing equipment – is an increasingly popular leisure activity, with many people trying a dive on holiday overseas or using one of the UK's hundreds of dive centres to explore marine life or ocean wrecks.

Whether you're a regular diver or just fancy a one-off adventure, you need to know that your dive is as safe as possible. Although recreational scuba diving has a good safety record, it's not without risks: one study estimated that it's 39 times more dangerous than driving a car. Possible hazards include entanglement, running out of air, air embolism in the blood, and the loss of body heat. To minimise these risks, eight European and international standards have been developed since 2003, covering everything from the training of divers and instructors to the equipment and procedures that should be used.

The standards, which are explained in this leaflet, have been well received by the diving industry worldwide, and provide clear benefits for divers as well as instructors and dive centres.

Scuba diving standards – The basics

There are eight international and European standards that relate to scuba diving. Together, they are designed to:

- Ensure the quality and safety of scuba dive experiences, training and equipment.
- Help consumers make informed choices about where they learn to dive.
- Provide clear standards for the teaching and guiding of divers.
- Create internationally recognised qualifications for divers and instructors.
- Give clear guidance to dive centres on how to conduct their activities safely.

Seven of the standards relate to scuba training, with separate standards for each training level from introductory dives to instructor training. These standards focus on safety and set out minimum requirements for how the training should be carried out and what divers need to learn. An eighth standard provides guidelines for dive centres to help them deliver their services – from training to equipment hire – safely.

Since the standards have been introduced, many training agencies across the world have worked to ensure their programmes comply.

Scuba diving standards – The details

The seven standards relating to scuba training help to ensure that courses are safe, well-structured and run by suitably qualified instructors. They describe:

- Any prerequisites for taking part in the course.
- The instructor's qualifications and credentials.
- The equipment to be used.
- The conduct of the training.
- The knowledge and practical skills that divers must achieve to reach that level.
- The activities that can be safely carried out by divers at each level.

Introductory scuba training programmes

BS ISO 11121:2009 applies to introductory dives for beginners trying out scuba diving in open water – the type of one-off experience that many people enjoy on holiday.

Diver level 1 – Supervised Diver

BS EN 14153-1:2003 (ISO 24801-1:2007) explains the competencies divers must achieve to be awarded level 1, also known as a Supervised Diver. For example, divers must complete at least two open-water dives of 15 minutes each as part of their training for this level.

Once qualified, a Supervised Diver can dive in the following conditions:

- To a maximum depth of 12 metres, on dives that don't require in-water decompression stops and where there is appropriate support at the surface.
- In groups of up to four level-1 scuba divers under the guidance of a dive leader.

Diver level 2 – Autonomous Diver

BS EN 14153-2:2003 (ISO 24801-2:2007) sets out the knowledge and skills needed to reach level 2, known as Autonomous Diver. Training must include at least four open-water dives.

A level-2 diver is qualified to dive in the following conditions:

- To a maximum depth of 20 metres, on dives that don't require in-water decompression stops and where there is appropriate support at the surface.
- With other divers of the same level without the direct supervision of an instructor.

Diver level 3 – Dive Leader

BS EN 14153-3:2003 (ISO 24801-3:2007) outlines the knowledge and skills required to reach level 3, known as Dive Leader. Qualified Dive Leaders may act as dive marshals or divemasters, organising groups of divers. They may also help to control students and improve safety, but may not assess or teach students.

Training programmes on enriched air nitrox diving

BS ISO 11107:2009 describes the knowledge and competencies divers need in order to be certified to buy and use enriched air (nitrox), which is used by scuba divers to breathe underwater.

Instructor training

Two standards relate to the training of diving instructors. They set out the competencies needed to carry out training for the different levels described above. These standards ensure that anyone learning to dive receives high quality instruction from well qualified, experienced divers.

Instructor level 1 (BS EN 14413-1:2004 and ISO 24802-1:2007)

Scuba instructors at level 1 are qualified to teach and assess confined water skills and theoretical knowledge up to diver level 1. Under the supervision of a level-2 instructor, they may also teach the theoretical knowledge for levels 2 and 3, and may teach any level of diver in confined water, such as a swimming pool.

Instructor level 2 (BS EN 14413-2:2004 and ISO 24802-2:2007)

Level-2 instructors are trained to plan, organise and conduct dives and rescue activities, and to lead other divers in open water. They may also teach and assess students up to diver level 3.

Service providers

BS EN 14467:2004 (ISO 24803:2007) applies to service providers – usually dive centres or clubs – that offer training, organised dives, or equipment hire. This standard outlines minimum requirements for equipment, risk assessment and emergency provision to ensure that all activities are carried out safely.

Note about standard names

The standards with a prefix BS EN are European standards, while those beginning BS ISO are international standards. In many cases, each standard has a European and international version: the content is the same but organizations outside Europe will list the ISO version on certificates.

Checklist: What to expect

Many training agencies in the UK and overseas have worked to ensure that their training complies with the standards outlined in this leaflet. See *Further Information* for details of two of the main agencies that comply.

When you choose a dive centre or club, be sure to check that:

- ✓ Your instructor holds a scuba instructor level-1 or level-2 certificate that is CEN and ISO compliant – this confirms that they have the skills and competencies required by the standards.
- ✓ Any certification you receive at the end of your training is CEN and ISO compliant – this provides you with an internationally recognised qualification, and means your training meets the safety requirements of the relevant standard.

USEFUL INFORMATION

The organizations below have been externally audited to confirm that their training meets the relevant standards.

British Sub-Aqua Club (BSAC) – www.bsac.com

Professional Association of Diving Instructors (PADI) – www.padi.com

Frequently asked questions

Q. Who developed the standards?

A. The standards were drawn up by the International Organization for Standardization (ISO) and the European Committee for Standardization (CEN). ISO and CEN are non-governmental bodies that develop standards to support business and consumers. The British Standards Institution (BSI) is a member of ISO and CEN, and worked to put together the scuba diving standards.

Q. What does BSI do?

A. BSI has been developing standards for more than 100 years in order to help make products and services safer for consumers. Standards set out good practice and guidelines for organizations to follow.

Q. Who provides scuba diving training?

A. Scuba training in the UK is usually conducted by instructors at a local dive club or dive centre. Instructors teach using the guidelines laid down by one of the main training agencies such as BSAC and PADI – see Useful Information inside. The clubs are usually independent from the main training agency and responsible for organising their own training schedules and prices.

Q. I want to learn to dive. How can I find a club that meets the standards?

A. Contact the main training agencies (see Useful Information inside) or search their websites for details of a local certified dive club or dive centre.

Q. I'm going on holiday to Greece and want to try a dive. Can I be sure this will be as safe as in the UK?

A. The standards described in this leaflet apply internationally. So, as long as you choose a course or centre that can show it meets the standards, you can be assured of the same safe, high-quality training wherever you choose to dive.

Q. Who checks whether training agencies meet the standards relating to scuba diving?

A. An organization can claim compliance with the standard. It may also choose to seek certification, whereby an independent certification body (ideally one that is accredited by the national accreditation body – UKAS in the UK) conducts checks to confirm (certify) that it complies.

Q. If an organization doesn't follow the standard is it breaking the law?

A. It is not in most countries a legal requirement to follow these standards. If, though, the consumer has booked their diving holiday through a UK organization (or UK branch of an international organization), which claims to comply with a Standard, but in fact does not comply, that becomes an offence. In the first instance the consumer will be expected to draw this to the attention of the provider (with a reference to the Standard number), and if a proper response is not received, to the certifying body. It will usually be helpful to establish early contact with the Government advice line "Consumer Direct" (0845 4040506), as this holds model letters of complaint, and will also be able to advise about further action such as reference to Trading Standards. It may be possible for Trading Standards to help through reciprocal arrangements where the holiday is booked outside the UK.

Even if the UK company does not claim compliance, in the event of a serious complaint or incident, the Standard could be used in court to provide a benchmark of best practice and possibly to prove negligence.

Q. Where can I find a copy of the standards mentioned in this leaflet?

A. Your local public library should be able to give you access to a reference copy, or you can buy a copy from BSI either as a printed document or in electronic form (PDF format).

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