

Making scuba diving safer

A consumer's guide to the standards for recreational scuba diving

bsi.

...making excellence a habit."

Scuba diving – swimming underwater with special breathing equipment – is increasingly popular, with many people trying a dive on holiday or using one of the UK's hundreds of dive centres to explore marine life or ocean wrecks. Although recreational scuba diving has a good safety record, it's not without risks.

To minimize hazards, a series of European and international standards has been developed, setting safety requirements for everything from the training of divers and instructors to the equipment and procedures that should be used.

Scuba diving standards – the basics

Eight international and European standards cover various different aspects of scuba diving. Together, they:

- Ensure the quality and safety of scuba dive experiences, training and equipment
- Help consumers make informed choices about where they learn to dive
- Create internationally recognized qualifications for divers and instructors



Scuba diving standards – the details

The standards below 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 with the same content but different numbering. Organizations outside Europe will list the ISO version, for example on websites and certificates. European organizations may state that they are CEN compliant: CEN refers to the European Committee for Standardization, which helped to draw up the standards.

Seven of the standards relate to different levels of training, from introductory dives to training for instructors. These standards, outlined below, set minimum requirements for:

- How the training should be carried out
- The instructor's qualifications and credentials
- The knowledge and skills to be taught at each level
- Activities that can safely be carried out by qualified divers at each level

Introductory scuba training programmes

(BS ISO 11121:2009)

This applies to introductory dives for beginners in open water – the type of one-off experience that many people enjoy on holiday.

Diver level one - Supervised Diver

(BS EN 14153-1:2003 and ISO 24801-1:2007) To reach this level, divers must complete at least two open-water dives of 15 minutes each. Once qualified, a Supervised Diver can dive:

- 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-one scuba divers under the guidance of a dive leader

Diver level two - Autonomous Diver

(BS EN 14153-2:2003 and ISO 24801-2:2007) Training for level two must include at least four open-water dives. A level-two diver is qualified to dive:

- 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 three - Dive Leader (BS EN 14153-3:2003 and ISO 24801-3:2007)

Qualified Dive Leaders may act as dive marshals or divemasters, organizing groups of other divers. They may also help to control students and improve safety, but may not assess or teach.

Training programmes on enriched air nitrox diving (BS ISO 11107:2009)

This standard describes the knowledge and skills divers need in order to be certified to buy and use enriched air (nitrox), which is used to breathe underwater.

Instructor training

Two standards cover the training of diving instructors. They ensure that anyone learning to dive receives high quality instruction from well qualified, experienced divers. The two standards are as follows:

- Instructor level one (BS EN 14413-1:2004 and ISO 24802-1:2007) – Level-one instructors can teach and assess confined water skills and theoretical knowledge up to diver level one. Under the supervision of a level-two instructor, they may also teach theoretical knowledge for levels two and three, and may teach any level of diver in confined water, such as a swimming pool
- Instructor level two (BS EN 14413-2:2004 and ISO 24802-2:2007 – Level-two instructors are qualified to teach and assess students up to diver level three. They can also plan, organize and conduct dives and rescue activities, and lead other divers in open water

Service providers (BS EN 14467:2004 and ISO 24803:2007)

The eighth standard applies to service providers – usually dive centres or clubs – that offer training, organized dives, or equipment hire. It sets out minimum requirements for equipment, risk assessment and emergency provision.

Choosing your dive centre:

- Two of the main dive agencies the British Sub-Aqua Club (BSAC) and the Professional Association of Diving Instructors (PADI) – are externally audited to confirm that their training meets the relevant standards. Instructors at diving clubs and centres usually teach using the guidelines laid down by one of these agencies. Contact the agencies (see Useful Information) for details of a certified club or centre. Certified organizations are independently checked to ensure they comply with the standards
- Check that your instructor holds a scuba instructor level-one or level-two certificate that is CEN or ISO compliant
- Check that any certification you receive at the end of your training is CEN or ISO compliant

 this provides you with an internationally recognised qualification, and means your training meets the relevant safety requirements
- The standards apply internationally so, if you choose a course or centre that complies, you can be sure of the same safe, high-quality experience wherever in the world you are diving

Frequently asked questions

Q. What is BSI?

A. BSI is the UK National Standards Body, which has been developing standards for more than 100 years to make products and services safer for consumers. Standards set out good practice and guidelines for organizations to follow.

Q. Who developed the standards in this leaflet?

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

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

A. In most countries, it's not a legal requirement to follow the standards. However, if you book your dive with a UK organization (or UK branch of an international organization) that claims to comply with the standard, then doesn't, it is a misrepresentation and can be reported to Trading Standards. Where the dive is booked outside the UK, it may be possible for Trading Standards to help through reciprocal arrangements with overseas organizations.

Even if the UK company does not claim compliance with the standards, in the event of a serious complaint or incident, the standard could be used in a court of law to provide a benchmark of best practice. **Q.** Where can I get a copy of the standards mentioned in this leaflet?

A. Your local public library may be able to help you access a reference copy, or you can buy a copy from BSI at shop.bsigroup.com

Useful information British Standards (BSI) 020 8996 9001 www.bsigroup.com

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

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

Scuba Schools International www.divessi.com

Trading Standards Institute www.tradingstandards.gov.uk



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