
**Recreational diving services —
Requirements for the training of
recreational scuba divers —**

Part 1:
Level 1 — Supervised diver

*Services relatifs à la plongée de loisirs — Exigences concernant la
formation des plongeurs pratiquant la plongée de loisirs —*

Partie 1: Niveau 1 — Plongeur encadré





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is Technical Committee ISO/TC 228, *Tourism and related services*.

This second edition of ISO 24801-1 cancels and replaces the first edition (ISO 24801-1:2007), which has been technically revised.

ISO 24801 consists of the following parts, under the general title *Recreational diving services — Requirements for the training of recreational scuba divers*:

- *Part 1: Level 1 — Supervised diver*
- *Part 2: Level 2 — Autonomous diver*
- *Part 3: Level 3 — Dive leader*

Introduction

This part of ISO 24801 is one of a series of International Standards relating to recreational diving services, which have been prepared with the aim of establishing a set of specifications for safety practices and the provision of services.

These International Standards specify:

- necessary levels of experience and competency of scuba divers and scuba instructors;
- safety practices and requirements for recreational scuba diving service providers appropriate to the different diving levels.

The requirements specified are minimal; they do not preclude the provision of additional training or the evaluation of additional competencies by a service provider. These International Standards represent a tool for comparison of existing (or future) qualifications of scuba divers. They do not represent a course programme, nor do they imply that course programmes and scuba diver qualifications issued by different nations or training organizations are required to correspond to these levels.

Recreational diving services — Requirements for the training of recreational scuba divers —

Part 1: Level 1 — Supervised diver

1 Scope

This part of ISO 24801 specifies the competencies required of a scuba diver in order to obtain a scuba diver qualification from a training organization attesting that he/she has met or exceeded scuba diver level 1 (“Supervised diver”), and specifies evaluation criteria for these competencies.

It also specifies the conditions under which training is provided, in addition to the general requirements for recreational diving service provision in accordance with ISO 24803.

This part of ISO 24801 applies to training and evaluation in recreational scuba diving.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 24801-3, *Recreational diving services — Requirements for the training of recreational scuba divers — Part 3: Level 3 — Dive leader*

ISO 24802-1, *Recreational diving services — Requirements for the training of scuba instructors — Part 1: Level 1*

ISO 24802-2, *Recreational diving services — Requirements for the training of scuba instructors — Part 2: Level 2*

ISO 24803, *Recreational diving services — Requirements for recreational scuba diving service providers*

EN 250:2000, *Respiratory equipment — Open-circuit self-contained compressed air diving apparatus — Requirements, testing, marking*

EN 12628:1999, *Diving accessories — Combined buoyancy and rescue devices — Functional and safety requirements, test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions of EN 250:2000 and EN 12628:1999 and the following apply.

3.1 training organization

entity providing training systems and issuing qualifications for recreational diving, and which is responsible for the implementation and quality management of training

Note 1 to entry: Entity can include scuba diving federations and scuba diver training agencies.

3.2

scuba instructor

individual qualified in accordance with ISO 24802-1 or ISO 24802-2

3.3

dive leader

individual qualified in accordance with ISO 24801-3

3.4

breathing gas

mixture of oxygen and nitrogen with no less than 20 % oxygen

3.5

confined water

swimming pool with a depth appropriate to the activity or body of water, offering similar conditions with regard to visibility, depth, water movement and access

3.6

open water

body of water significantly larger than a swimming pool, offering conditions typical of a natural body of water

3.7

diving equipment

equipment consisting of fins, mask, snorkel, regulator, alternative breathing gas system, cylinder, cylinder-support-system, buoyancy compensator, a quick release weight system (if appropriate), submersible pressure gauge (breathing gas pressure monitor), means to measure depth and time and to safely limit exposure to inert gas, diving suit (if appropriate)

Note 1 to entry: An alternative breathing gas system could range from a simple octopus system to a duplicate breathing system with a separate breathing gas supply.

Note 2 to entry: Specific environments can require additional equipment (e.g. an underwater navigational aid, knife/cutting device, delayed surface marker buoy).

3.8

direct supervision

supervision of a group of divers by a scuba instructor or a dive leader who is in a position that allows rapid intervention on behalf of the divers

4 Competencies of a recreational scuba diver at level 1 (“Supervised diver”)

Scuba divers at level 1 shall be trained such that when evaluated in accordance with [Clause 10](#) they are deemed to have sufficient knowledge, skill and experience to dive in open water under the direct supervision of a dive leader.

Scuba divers at level 1 are qualified to dive within the following parameters:

- dive to a recommended maximum depth of 12 m;
- dive in groups of up to four level 1 scuba divers per dive leader;
- make dives which do not require in-water decompression stops;
- dive only when appropriate support is available at the surface;
- dive under conditions that are equal or better than the conditions where they were trained.

If accompanied by a scuba instructor, a scuba diver at level 1 may gain progressive experience beyond these parameters and develop competency in managing more challenging diving conditions designed to lead to higher qualifications.

Where further instruction is required this can only be provided by a suitably qualified scuba instructor. Where only further experience is required, this may be supervised by a dive leader.

5 Prerequisites for training

5.1 General

The service provider shall ensure that the client fulfils the following prerequisites to take part in the training course envisaged.

5.2 Minors

Documented parental or legal guardian consent shall be obtained when the applicant is a minor.

5.3 Health requirements

Documented evidence shall be obtained that the student has been medically screened as suitable for recreational diving by means of an appropriate questionnaire or medical examination (see [Annex A](#) for an example of a medical sheet). In any case of doubt, or at the scuba instructor's discretion, students shall be referred to proper medical resources. If the student is not examined by a physician the student shall be obliged to confirm by signature that he or she has understood written information given by the scuba instructor on diseases and physical conditions which can pose diving related risks.

Students shall be advised of the importance of appropriate regular medical examinations.

6 Introductory information

Information in accordance with ISO 24803 shall be made available to the students prior to, or during the first class meeting.

7 Required theoretical knowledge

7.1 Equipment

Students shall have an appropriate knowledge concerning the practical use of diving equipment items as defined in [3.7](#).

7.2 Physics of diving

Students shall have an appropriate knowledge of the influence and effects of changing pressure in particular regarding:

- equalization (e.g. ears and mask);
- breathing (not holding breath and effect of pressure on air consumption);
- buoyancy and how to control it.

7.3 Medical problems related to diving

7.3.1 General

Students shall have a basic knowledge of avoiding problems resulting from [7.3.2](#) and [7.3.3](#).

7.3.2 Direct effects of pressure

7.3.2.1 Increasing pressure (descent phase):

- gas compression (e.g. ears, sinuses, masks, lungs, suits, teeth).

7.3.2.2 Decreasing pressure (ascent phase):

- gas expansion (e.g. ears, sinuses, lungs, stomach, intestines, teeth);
- forms of decompression illness (DCI) (e.g. decompression sickness, arterial gas embolism).

7.3.3 Other hazards:

- physical and mental stress;
- effects of temperature on the scuba diver;
- medication, drugs, alcohol.

7.4 Diving environment

Students shall have a basic knowledge concerning the local and general conditions of the diving environment and their possible effects on the scuba diver and the scuba diver's impact on the environment.

7.5 Scuba diver separation procedures

Students shall have knowledge concerning correct actions in the event of separation from the group or their buddy.

7.6 Use of breathing gases other than air

Where a breathing gas other than air is used during the training course, the student shall be made aware of any depth limits, oxygen exposure management issues and equipment considerations relevant to the dives planned.

8 Required scuba skills

8.1 Confined water scuba skills

Students shall be able to demonstrate capability in the following skills; each skill shall be satisfactorily practised in confined water before that skill is performed in open water:

- use of mask, fins and snorkel;
- diving equipment assembly and disassembly (at water's edge);
- entry and exit;
- mouthpiece clearing both snorkel and regulator;
- regulator/snorkel exchanges while swimming at the surface;
- proper descent and ascent procedures (e.g. equalising pressure in ears and mask);
- swim under-water;
- mask-clearing, including removal and replacement;

- under-water and surface buoyancy control;
- under-water regulator recovery;
- basic instrument monitoring;
- surface operation of the quick release of the weight ballast system;
- act as receiver of an alternative breathing gas source;
- equipment care;
- basic hand signals.

8.2 Open water scuba skills

Students shall be able to perform the following skills:

- use of mask, fins and snorkel;
- diving equipment assembly and disassembly (at water's edge);
- entry and exit;
- mouthpiece clearing both snorkel and regulator;
- regulator/snorkel exchanges while swimming at the surface;
- proper descent and ascent procedures (e.g. equalising pressure in ears and mask);
- swim under-water;
- mask-clearing;
- under-water and surface buoyancy control;
- under-water regulator recovery;
- basic instrument monitoring;
- surface operation of the quick release of the weight ballast system;
- act as receiver of an alternative breathing gas source;
- equipment care;
- basic hand signals.

9 Practical training parameters

9.1 An open water dive shall comprise at least the following activities:

- briefing;
- preparation to dive;
- pre-dive checks;
- entry into water;
- descent procedures;
- under-water activity;

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- ascent and surfacing procedures;
- exit from water;
- debriefing;
- post dive procedures;
- recording the dive.

For the purposes of this part of ISO 24801, the concept of open water (see 3.6) may also include certain sites that are significantly larger and/or deeper than a typical swimming pool (e.g. very large aquariums and specifically-constructed, controlled environments designed for recreational diving) that provide some of the conditions typically associated with natural bodies of water, such as appropriate depths for diving, the ability to plan and experience a dive, bottom contour and composition, water temperatures representative of the open water dive experience. Such sites can be appropriate for conducting the open water dives.

9.2 All underwater skills in confined water shall be taught, directly supervised and evaluated by a scuba instructor, who shall be in the water during each session. The scuba instructor shall be in direct control of students throughout all sessions.

9.3 The student shall effectively show proof of, or demonstrate, to a scuba instructor:

- a) a five minute survival swim/float without the use of mask, fins, snorkel, or other swimming aids;
- b) distance swimming capability by one of the two following methods:
 - swim 200 m without the use of mask, fins, snorkel, or other swimming aids; or
 - swim 300 m using mask, fins and snorkel without other swimming aids.

If conditions warrant students may wear a diving suit provided they are weighted for neutral buoyancy.

9.4 Before participating in open water dives a student shall have demonstrated sufficient theoretical knowledge and scuba skills in confined water to be able to perform the open water dives in the prevailing conditions.

9.5 The maximum depth during training dives shall not exceed 12 m.

9.6 All open water dives shall be conducted in water that allows direct vertical access to the surface. Open water dives therefore shall not be conducted in under-water caves, inside wrecks or below ice.

9.7 During open water dives, the student shall at least be equipped with diving equipment as defined in 3.7, except that a means to measure depth and time and to safely limit exposure to inert gas is not required.

9.8 All under water skills in open water shall be taught, directly supervised and evaluated by a scuba instructor of level 2. The level 2 scuba instructor shall be in the water and in charge of each open water dive.

The safe supervision of students is solely the level 2 scuba instructor's responsibility. The level 2 scuba instructor shall limit the number of students per scuba instructor where environmental conditions are less than ideal, for example where underwater visibility is poor or there is significant water movement. The level 2 scuba instructor may also use additional aids to improve safety such as ascent lines, surface support stations or safety scuba divers. Where safety scuba divers are used they shall have an appropriate level of rescue competency of at least dive leader level.

9.9 The scuba instructor shall limit the number of students on open water dives so that either the scuba instructor or a dive leader is able to provide direct supervision.

9.10 The scuba instructor shall cancel or abort the open water dive if environmental conditions, equipment problems or a student's physical or mental condition make this necessary.

10 Evaluation

10.1 Knowledge

The student shall demonstrate to a scuba instructor knowledge of scuba diving by taking and passing an oral or written examination as prescribed by a training organization. This examination shall test scuba diver level 1 theoretical knowledge in accordance with [Clause 7](#) and knowledge of scuba skills in accordance with [Clause 8](#) (see [Annex B](#) for an explanatory example).

10.2 Scuba skills

The student shall satisfactorily demonstrate to a scuba instructor, the scuba skills in accordance with [Clause 8](#) (see [Annex B](#) for an explanatory example). Scuba skills in open water shall be evaluated by a level 2 scuba instructor.

Students to be qualified shall complete at least two qualifying open water dives in the range between 4 m and 12 m in accordance with [9.1](#) under the direct supervision of a level 2 scuba instructor. The underwater duration of each of these two qualifying open water dives shall be at least 15 min.

11 Requirements for training organizations

A training organization shall have a permanent headquarters and maintain records of all currently qualified scuba divers and scuba instructors at all levels.

The training organization shall identify the person or persons responsible for:

- implementation and maintenance of the training programme;
- quality assurance and customer satisfaction;
- recording diver qualifications;
- recording instructor qualifications.

A training organization shall be able to confirm the qualifications of a diver to diving instructors or service providers and shall be able to confirm the status of instructors to any interested party.

Annex A **(informative)**

Example of an information sheet for medical screening

Medical Statement

This is a statement in which you are informed of some potential risks involved in recreational scuba diving and of the conduct required of you during the recreational scuba training.

You must complete this Medical Statement, which includes the medical-history information section, to enrol in the recreational scuba-training programme.

To the Participant:

The purpose of this medical information sheet is to inform you whether you should be examined by a physician before participating in recreational diving training. If any of these conditions apply to you this does not necessarily disqualify you from recreational scuba diving. It only means that you must seek the advice of a physician.

Please acknowledge that you have read and understood the information provided below by initialling each individual point.

Please be advised that if any of these items apply to you, for your own safety you must consult a physician prior to participating in recreational scuba diving.

YOU MUST CONSULT A PHYSICIAN IF:	Initials
You are pregnant or you suspect you can be pregnant	
You regularly take medications (with the exception of birth control)	
You are over 45 years of age and one or more of the following apply:	
— you smoke	
— you have a high cholesterol level	
YOU SHOULD CONSULT A PHYSICIAN IF YOU EVER HAD:	Initials
Asthma, or wheezing with breathing, or wheezing with exercise	
Any form of lung disease	
Pneumothorax (collapsed lung)	
History of chest surgery	
Claustrophobia or agoraphobia (fear of closed or open spaces)	
Epilepsy, seizures, convulsions or take medications to prevent them	
History of blackouts or fainting (full/partial loss of consciousness)	
History of diving accidents or decompression sickness	
History of diabetes	
History of high blood pressure or take medications to control blood pressure	
History of any heart disease	
History of ear disease, hearing loss or problems with balance	
History of thrombosis or blood clotting	
Psychiatric diseases.	
I AM AWARE THAT I COULD BE UNFIT TO DIVE IF I HAVE OR DEVELOP DURING THE COURSE ANY OF THE FOLLOWING CONDITIONS:	Initials
Cold, sinusitis, or any breathing problems (e.g. bronchitis, hay fever)	
Acute migraine or headache	
Any kind of surgery within the last 6 weeks	
Under influence of alcohol, drugs or medications effecting the ability to react	
Fever, dizziness, nausea, vomiting and diarrhoea	
Problems equalising (popping ears)	
Acute gastric ulcers	
Pregnancy	

Annex B (informative)

Examples for the degree of mastery required for the level 1 scuba diver examination

Table B.1 — Theory topic

Theory topic	Required competency	Criteria testing
Equipment: Regulators	<ol style="list-style-type: none"> 1. Describe the major components and accessories of a scuba regulator system and its purpose. 2. Explain how to assemble and disassemble a scuba system. 3. Explain post-dive regulator care considerations. 4. ... 	Scuba instructor observation.

Table B.2 — Practical topic

Practical topic	Required competency	Criteria testing
Dive planning and preparation	<ol style="list-style-type: none"> 1. Personal preparation for dive (good health, etc.). 2. Equipment preparation. 3. Buddy checks. 4. Discuss buddy communication (e.g. hand signals). 5. ... 	Scuba instructor observation.
Buoyancy	<ol style="list-style-type: none"> 1. Perform a buoyancy check at the surface. 2. Demonstrate buoyancy control underwater by pivoting on the fin tips or other point of contact. Buoyancy is to be controlled by a buoyancy compensator or drysuit power inflator system and lung volume control. 3. ... 	Scuba instructor observation.

