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# SDI Dry Suit Diver

## Course description

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## Dry Suit Diver Programme

This programme is intended for everyone who has Open Water Diver level and who is willing to master the use of a dry suit. The course is made for you to acquire the following skills: choice of a dry suit in accordance with diving conditions and personal peculiarities; correct storage and maintenance procedures; managing the inner gas volume within the suit during a dive, elimination of all possible problems, connected with the use of a dry suit during a dive.

The Dry Suit Diver programme can be taken simultaneously with the Open Water Diver course.

## Course goals

As a result of theoretical and practical lessons the students are supposed to learn how to use a dry suit in diving practice:

- be able to choose, maintain and store a dry suit;
- preparation of a dry suit for a dive;
- correct weights picking and arranging;
- correct body position on the surface;
- correct body position when descending, when being underwater and when ascending to the surface;
- managing the inner gas volume of a dry suit;
- neutral buoyancy control when motionless or moving underwater;
- elimination of the problems connected with the use of a dry suit;

### Programme learning tasks

- 1 Present necessary theoretical and practical knowledge about the use of a dry suit.
- 2 Provide safe diving conditions for dry suit diving.
- 3 Conduct the assessment of a student's knowledge level.

### Course structure

The programme *The Use of A Dry Suit* consists of a theoretical and a practical part. A student who missed his/her theoretical part of the course is not allowed to proceed for the practical part of it.

Practical skills training is conducted in the conditions of confined water under the guidance of an instructor.

**Attention! Open water diving is only possible after skills practice in confined water.**

When conducting practical lessons the instructor has to **personally demonstrate** the succession of actions for each exercise and provide necessary safety control during students' performance of the tasks as well as comment on and eliminate the arising mistakes.

### Skills assessment

Skills assessment is conducted during practical lessons.

In case a student can't perform even a single exercise in the practical part, the instructor can refuse a certificate issue and recommend to continue the training until the necessary skill is fully mastered.

### Kit and equipment

During the practical lessons there has to be used the equipment that meets the course requirements:

1. Mask, fins
2. Scuba set
3. Dry suit
4. Undergarment
5. Gloves (3-7 mm)

6. Helmet (3-7 mm)
7. Weight belt or integrated weights system
8. Computer (or bottom timer)

Scuba set includes:

- air tank
- regulator with an octopus, a manometer, BCD inflation hose, dry suit inflation hose
- BCD

### Course duration

Theoretical part - minimum 1 hour, practical training - 1 confined water dive and 1 open water dive. **ATTENTION!** If the weather conditions are too severe (air temperature below - 20 Celsius or unstable ice situation in the dive site or a storm in the Baikal), we will make the second dive in a training barrel (9 meters deep)

### Course requirements

You can take part if you are:

- over 18 years old
- certified as Open Water Diver
- You don't have any medical restrictions for diving

## **Dry Suit Diver Course Description**

### Theoretical lesson

#### **1. What is a dry suit? When do you use it?**

- 1.1. What is a dry suit?
- 1.2. Why do you need a dry suit?
- 1.3. How it works
- 1.4. Where it is used

#### **2. Construction, types, and peculiarities of dry suits.**

- 2.1. Dry suit types
- 2.2. Suit and elements (obturators, zips) materials. Types of boots and socks in a dry suit. Pluses and minuses of different suits.
- 2.3. Dry suit base construction. Dry suit construction types and designs.
- 2.4. Additional elements (what can be added by the producer or on the purchaser's request)
- 2.5. Types of valves and valves arrangement
- 2.6. Using the tank and inflation regulator. Using Argon to make thermal insulation of a dry suit better.

#### **3. Practical use**

- 3.1. Preparation for the use. Putting a dry suit on. Typical mistakes when putting a dry suit on.

3.2. Weight picking and arrangement. Problems of incorrect weights picking and arrangement.

3.3. Equipment management during dive. Management types.

A) The main system of buoyancy control - BCD. Dry suit inflation is used only to reach the comfortable conditions (in terms of pressure and thermal insulation).

B) The main system of buoyancy control - Dry Suit. BCD is used only on the surface and as a support (reserve) system.

**IMPORTANT:** When taking the course, as a matter of developing Dry Suit operation skills, it is recommended to use option B.

3.4. Ascending. Ways of ascending depending on the type (A or B).

3.5 Problems when descending and their elimination.

- free flow in a dry suit.

- suit inflation impossible, diver experiencing pressure.

- “legs up” ascending

3.6. Taking a dry suit off. Typical mistakes when taking a dry suit off.

3.7. Handling a dry suit after a dive, transportation and storage.

### **Practical lesson in confined water**

The practical part of the course is conducted by an instructor. The instructor does not have the right to omit any of the exercises mentioned in the training schedule. Practical lessons duration can not be shortened.

### **Skills assessment**

An instructor can check student’s skills before practical lessons. The check is not obligatory and is conducted upon the instructor’s decision.

Skills check:

- 1) Neutral buoyancy control with the use of BCD when motionless/moving underwater.
- 2) Weight pick and check on the water surface
- 3) BCD management skills when descending and ascending

### **Exercises**

1. Putting a dry suit on.

2. Valves check: inflation/deflation (suit check)

3. Deflation on the surface (making as little air as possible inside the suit when on the water surface)

4. Getting in the water

5. Weights pick

6. Management of the air inside the suit on the water surface. Correct body position when deflating the gas from the suit.

7. Descending to the depth while keeping a constant volume of air inside the suit. It is necessary to get to the depth adding such an amount of air in the suit that the buoyancy would be a little bit negative and by the bottom it would become neutral.

8. Deciding on the comfortable air volume inside the suit. It is necessary to hover above the bottom in the correct position.

9. Fin pivot in a dry suit. A student has to perform this task by inflating and deflating a dry suit only, without the use of BCD. To balance correctly one has to inhale/exhale.

10. Neutral buoyancy control when motionless (hovering). It is necessary to demonstrate hovering in a horizontal position, in trim.

11. Swimming underwater and keeping neutral buoyancy. It is necessary to stay at the same depth and keep neutral buoyancy.

12. Head down trim, legs up ascending and resolving this situation.

A student is to hold something in his hands (for example, a rope or a pipe on the swimming pool bottom, a stone on the bottom), inflate the suit to the condition of excessive positive buoyancy, turn legs up and start ascending, then make a turn to get into a normal horizontal position.

13. Ascending. It is necessary to ascend in a horizontal position, keeping the speed of ascending correct and making a safety stop.

14. Fixing dry suit inflation valve malfunctions (freezing, clogging)

**Important!** Having thick gloves on it is necessary to disconnect a dry suit inflation hose and ascend, keeping normal speed (9 metres per minute). Inflate BCD on the surface with your mouth.

15. Getting out of the water and correct taking a dry suit off.

### **Dive 1 Confined Water Diving**

- 1 Briefing
- 2 Scuba assembling
- 3 Putting a dry suit on
- 4 Valves check: inflation/deflation
- 5 Air deflation on the surface (minimizing air volume inside the suit)
- 6 Weights pick Putting weights and scuba on
- 7 Putting weights and scuba on
- 8 Getting in the water
- 9 Inflation and deflation of a dry suit on the water surface, correct arms position when deflating the air from the suit
- 10 Descending to the depth while controlling constant air volume inside the suit
- 11 Deciding on the comfortable air volume inside the suit
- 12 Fin pivot using a dry suit
- 13 Neutral buoyancy training (hovering) in a horizontal position, in trim. The exercise is conducted motionless (not moving anywhere, in one place).
- 14 Neutral buoyancy control when swimming underwater.
- 15 Ascending
- 16 Getting out of the water
- 17 Taking a scuba off
- 18 Correct taking a dry suit off
- 19 Equipment disassembling
- 20 Debriefing

### **Dive 2 Open Water Dive**

**NOTE!** If the weather conditions are too severe (air temperature below - 15 Celsius and very windy or unstable ice situation in the dive site or a storm in the Baikal), we will make the second dive in a training barrel (9 meters deep)

- 1 Briefing. Description of the place of diving and dive goals. Splitting into groups. Discussing safety procedures and signals. Exercises set.

- 2 Equipment preparation
- 3 Putting a dry suit and a scuba on.
- 4 Getting into the water
- 5 Underwater excursion and making the exercises that were practised in confined water: fin pivot, legs up ascending, free flow.
- 6 Getting out of the water
- 7 Taking off and disassembling the equipment
- 8 Debriefing. Discussing the dive in detail: weak and strong points of the student.

Course cost - 12000 roubles

Certificate cost *(if the student demonstrates all the skills correctly and the instructor decides to issue a certificate)* - 3000 roubles *(postal delivery to the student's address is included)*

