



CMAS ACCELERATED DECOMPRESSION DIVER STANDARD



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CMAS

COMITE DIRECTEUR VISA N°:224

1. AIM OF THE TRAINING PROGRAMME

- 1.1. This training programme aims at widening the experience gained since becoming an Advanced Nitrox diver through theory and techniques.
- 1.2. The objective of this course is to train divers in the proper techniques, equipment requirements, and hazards of deep air diving to a maximum of 54 metres utilising Nitrox mixtures or oxygen for staged decompression.

2. CLASSIFICATION

- 2.1. The CMAS Accelerated Decompression Diver Training Programme is classified as an intermediate-level technical diver training programme.

3. INSTRUCTOR AND ASSISTANT REQUIREMENTS

- 3.1. The CMAS Accelerated Decompression Diver Training Programme may be presented by any CMAS Instructor who holds a minimum of CMAS Accelerated Decompression Instructor grading in active status that complies with the requirements of the national federation.
- 3.2. The CMAS Normoxic Trimix Instructor may be assisted by CMAS Divemaster who holds a CMAS Accelerated Decompression Diver certification.

4. COURSE STRUCTURE AND DURATION

- 4.1. The minimum duration is 2 days;
- 4.2. The participants must complete a minimum of four (4) open water scuba dives with a maximum depth of 54meters with a minimum of 200 minutes spent underwater.
- 4.3. All dives must be deeper than 30 metres with Two (2) other pair of dives must be performed with air utilising nitrox and / or oxygen mixtures during decompression to maximum depth of 54 metres.
- 4.4. CMAS allows instructors to structure courses according to the number of students participating, their skill level and the diving environment.

5. COMPETENCIES OF A CERTIFIED CMAS ACCELERATED DECOMPRESSION DIVER

- 5.1. To plan, conduct, and log deep air open-water dives that can involve in-water, decompression stops using Nitrox mixes up to and including pure oxygen, when properly equipped with service oxygen clean Scuba;
- 5.2. The participants may engage in decompression diving activities without direct supervision provided:
 - 5.2.1. Dive with a scuba diver at least equal training;
 - 5.2.2. The diving activities approximate those of training;
 - 5.2.3. The areas of activities approximate those of training;
 - 5.2.4. Environmental conditions approximate those of training.

6. PREREQUISITES FOR PARTICIPATION IN THE TRAINING PROGRAMME

- 6.2.1. Be at least eighteen (18) years of age.
- 6.2.2. Complete the Medical History/Statement Form required by the CMAS Federation prior to participating in any in-water activities; and
- 6.2.3. Sign the appropriate Form(s) as required by the National Federation acknowledging and assuming the risks of SCUBA diving prior to participating in any in-water activities.

7. EXPERIENCE / KNOWLEDGE/CERTIFICATION

- 7.2.1. Hold a minimum CMAS Advanced Nitrox Diver certification or equivalent;
- 7.2.2. Hold CMAS three (3) star diver or equivalent certification;
- 7.2.3. Provide proof of a minimum of 100 logged dives, of which 25 must be deeper than 30 metres ;

8. RATIO CANDIDATE/ INSTRUCTOR

SKILLS	MAXIMUM CANDIDATES	INSTRUCTOR
THEORY	12	1
OPEN WATER	4	1

9. REQUIREMENTS FOR CERTIFICATION

- 9.1. Successfully complete the theoretical assessment of this standard;
- 9.2. For the accelerated decompression certification, at least four (4) dives are to be planned and safely executed using air and or Nitrox in bottom and nitrox and / or oxygen mixtures during decompression one of which a repetitive dive;
- 9.3. Identify the advantages and disadvantages of deep air diving;
- 9.4. Demonstrate their knowledge of the physiology related to this level of deep air with Nitrox and pure oxygen diving;
- 9.5. Demonstrate their knowledge how to plan decompression with Run-time tables, software and diving computer;
- 9.6. Prepare dive plans and back-up plans for diving procedures, normal operation, Failure, loss or inadequate emergency procedures and omitted decompression;
- 9.7. Demonstrate their knowledge how prepare operating planning, team planning and emergency planning.

10. REQUIRED THEORETICAL KNOWLEDGE AND DIVING SKILLS

10.1. SYLLABUS REQUIREMENTS

10.1.1. The following topics are to be covered:

10.1.2. history of deep air diving pressure reviews, formulas for solving dive planning problems, maximum operating depth (mod), best mix, etc., physiology, hypoxia, oxygen toxicity, whole body (OTU), central nervous system, nitrogen narcosis, nitrogen absorption and elimination, carbon dioxide toxicity (CO₂), hypothermia, decompression options, equipment considerations, ascent and navigation reels, lift bags/surface marker buoys for drifting or free decompression, lights, redundant mask and knife, Jon-line or Garvin clips, dive tables, introduction to the computer generated tables, dive planning, operation planning, support, team planning, gas requirements, emergency planning, omitted decompression, decompression sickness bottom, travel and decompression gas, failure, loss or inadequate emergency procedures, analysis and logging and trim and compensation.

11. PRACTICAL TRAINING PARAMETERS

11.1. OPEN WATER SCUBA SKILLS

- 11.1.1. Demonstrate buoyancy control; ability to hover at fixed position in the water column without moving hands or feet;
- 11.1.2. Deploy SMB hovering without mask, control buoyancy using ear pressure & without reference point;
- 11.1.3. Demonstrate competence managing 2 stage cylinders, either 2 deco gas or 1 deco and extra bottom gas, including drop and recovery while maintaining position in the water column;
- 11.1.4. Demonstrate ability to confirm gas switches at depth with buddy/team members;
- 11.1.5. Demonstrate lift bag deployment from depth and use of bag as back-up buoyancy device;
- 11.1.6. Demonstrate air-sharing ascent from depth while one member of the buddy team is without mask, both as a donor and recipient;
- 11.1.7. Create contingency decompression schedule after simulated loss of decompression gas;
- 11.1.8. Remove and replace mask, deploy backup mask;
- 11.1.9. Demonstrate tired diver tow at depth and on surface; 50 metres lateral
- 11.1.10. Complete a horizontal breath-hold swim at depth for 15 metres mask off or blacked out;
- 11.1.11. Demonstrate the proper procedures for switching and isolating a malfunctioning regulator. This skill is to be performed at a depth no deeper than 40 metres;
- 11.1.12. During 2 dives, demonstrate an ascent with ascent reel and lift bag and perform staged decompression;
- 11.1.13. During 1 of the dives, tow a simulated unconscious diver, while at depth, 10 metres to the ascent line and simulate an emergency rescue ascent technique.

12.

13. ASSESSMENT

13.1. KNOWLEDGE

- 13.1.1. The participant shall demonstrate to the CMAS Accelerated Decompression Instructor knowledge of Accelerated Decompression diving theory and techniques by taking and passing a written and a practical examination.

13.2. PRACTICAL SKILLS

- 13.2.1. The participant shall demonstrate the correct use of Air in the bottom and nitrox and / or oxygen mixtures during decompression;
- 13.2.2. Demonstrate his/her ability to plan deep Air diving with decompression by utilising nitrox and / or oxygen mixtures
- 13.2.3. The participant must display a good mental attitude towards this type of diving during all dives;
- 13.2.4. The participant must demonstrate the ability to manage dive plans and back-up plans for diving procedures, normal operation, Failure, loss or inadequate emergency procedures and omitted decompression;
- 13.2.5. The participant must demonstrate the ability to operating planning, team planning and emergency planning.
- 13.2.6. The participant must perform a deep Air dive at 54m using nitrox and / or oxygen mixtures during decompression in a safe and secure manner.
- 13.2.7. The participant must demonstrate the ability to perform the decompression stop(s) under various conditions;
- 13.2.8. Programme computer, software and Run-time table, with appropriate oxygen percentage in decompression

14. CERTIFICATION

- 14.1. Upon successful completion of the training programme, the participant shall be awarded with a CMAS Accelerated Decompression Diver C-card.