



# CMAS

CONFÉDÉRATION MONDIALE  
DES ACTIVITÉS SUBAQUATIQUES

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WORLD UNDERWATER FEDERATION

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**CMAS Scooter Diver Courses**

**CMAS Training & Certification System**

**GENERAL TERMS**

**VERSION 2008/01**

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# CAUTION

The operation and handling of an underwater scooter, as well as the appropriate technical maintenance requires a certain minimum of technical understanding and knowledge, a certain minimum level of diving skills and competence and an appropriate equipment configuration. As any moving object may represent a potential danger to other persons in its vicinity, the driver must also have a distinctive feeling of responsibility for all his/her doing.

*Therefore, CMAS does NOT endorse, promote or otherwise recommend the use of such devices, even at recreational diver course level, for*

- *persons of less than 16 years of age*
- *divers not having at least a CMAS 2star diving certificate (or equivalent)*
- *divers without the proper training as received in a CMAS (or otherwise) sanctioned scooter diver course*
- *divers not meeting the minimum requirements for mandatory equipment and its configuration (ref. to standards and training program for CMAS scooter diver courses)*
- *diving beyond the limits as set by the diver's certification level or the operational limits set by the manufacturer of such a device (whichever applies first)*

Having appropriate private liability insurance with a minimum coverage of 2 Mio. Euros is absolutely mandatory.

By no means and under no circumstances, must scooters or any other towing devices be used as a substitute for the lack of physical fitness.

# 1 Glossary of used terms and abbreviations

## 1.1 Equipment

BC	Buoyancy Compensator (vest, jacket)
SPG	Submersible Pressure Gauge (depth-gauge)
SMB	Surface Marker Buoy
a dangly	a piece of equipment loosely hanging down, not closely attached to the body

## 1.2 Organisations

NACD	National Association for Cave Diving
NSS-CDS	National Speleological Society – Cave Diving Section
SNSS	Scuola Nazionale di Speleologia Subacquea
CDA	Cave Diving Association of Australia
CDG	Cave Diving Group (Great Britain)
ANDI	American Nitrox Divers International
TDI	Technical Diving International
IANTD	International Association of Nitrox and Technical Divers

## 1.3 Certifications / Levels of Training

### 1.3.1. Foreign

OWD	Open Water Diver (entry diver level); equiv. to CMAS 1star
AOWD	Advanced Open Water Diver; equiv. to CMAS 2star
MSD	Master Scuba Diver ; equiv. to CMAS 3star
DM	Divemaster; approx. equiv. to a CMAS 4star

### 1.3.2. CMAS

Cave Diver 1	= Cavern Diver Diver certified to dive in zone 1 (daylight zone) of a cave with a permanent guideline; depth limit 20m, max. penetration 50m from surface
Cave Diver 2	= (Advanced) Cave Diver Diver certified to dive in zone 2 (zone of total darkness) of a cave; depth limit 30m, no sumps, no restrictions, max. penetration set by 2x10l tank
Cave Diver 3	= Full Cave Diver Diver certified to dive in zone 3 of a cave, which is anything beyond zone 2; depth limit 40m EAD.

## 1.4 Scooters designations (synonyms)

DPV	Diver Propulsion Vehicle (mainly used in US)
ADV	Advanced Diving Vehicle (used by SUEX)
UPV	Underwater Propulsion Vehicle
Propulseur	French term for underwater scooter

## 1.5 Other

<b>Overhead environment</b>	<b>Any diving place where the direct ascent to the water surface is not possible due to natural or artificial obstructions such as caverns, caves, wrecks, mines, submerged buildings, under ice.</b>
OOA-situation	Out-of-Air situation
OOG-situation	Out-of-Gas situation (more general term)

# I

## Certification Levels and definitions for divers, assistants and instructors

### 1 Diver Level (certification course)

#### 1.1 **CMAS Recreational Scooter Diver (RSD)**

Entry level scooter diver course for use in open water only, with sport diver equipment and with at least class 1 (or higher) rated scooters.

#### 1.2 **CMAS Tec Scooter Diver (TSD)**

Advanced scooter diver course for use in open water only, with equipment for technical diving (in combination with mixed gas diving such as Nitrox and Trimix), and with at least class 2 (or higher) rated scooters.

#### 1.3 **CMAS Overhead Environment Scooter Diver (OSD)**

Advanced scooter diver course for use in any type of natural or artificial overhead environment (caverns, caves, wrecks, mines, submerged buildings, under ice), including mixed gases and with class 3 rated scooters only.

#### 1.4 **NOTES**

1.4.1. Any Scooter Diver level is a certification level

1.4.2. On any level, a written theory exam - consisting of 20 MC questions - to evaluate the theoretical knowledge of the student is mandatory. In order to pass, the student has to reach a score of min. 80% correct answers.

### 2 Assistant Level (no distinctive certification)

#### 2.1 **CMAS Recreational Scooter Assistant (RSA)**

Divers and Instructors fulfilling the requirements to act as assistants during CMAS Recreational Scooter Diver certification courses.

#### 2.2 **CMAS Tec Scooter Assistant (TSA)**

Divers and Instructors fulfilling the requirements to act as assistants during CMAS Tec Scooter Diver certification courses.

#### 2.3 **CMAS Overhead Environment Scooter Assistant (OSA)**

Divers and Instructors fulfilling the requirements to act as assistants during CMAS Overhead Environment Scooter Diver certification courses.

#### 2.4 **NOTES:**

2.4.1. The Scooter Assistant level is a non-certification level, so there is no specific scooter assistant certificate. However, federations are free to issue any other suitable type of recognition material for any successful former assistant candidate.

2.4.2. On any level, an assistant CANDIDATE is an otherwise fully qualified person, who is involved for the FIRST TIME in the role of an assistant, and who is evaluated in this role.

### 3 Instructor Level (certification level)

#### 3.1 **CMAS Recreational Scooter Instructor (RSI)**

Instructors fulfilling the requirements to organize, teach and execute CMAS Recreational Scooter Diver certification courses and issue corresponding certificates.

#### 3.2 **CMAS Tec Scooter Instructor (TSI)**

Instructors fulfilling the requirements to organize, teach and execute CMAS Tec Scooter Diver certification courses and issue corresponding certificates.

#### 3.3 **CMAS Overhead Environment Scooter Instructor (OSI)**

Instructors fulfilling the requirements to organize, teach and execute CMAS Overhead Environment Scooter Diver certification courses and issue corresponding certificates.

#### 3.4 **NOTES:**

3.4.1. Any Scooter Instructor level is a certification level

3.4.2. On any level, an instructor CANDIDATE is an otherwise fully qualified person, who is involved for the FIRST TIME in the role of an instructor, and who is evaluated in this role.

## II

# Requirements for assistants and instructors

## 1 ASSISTANTS

### 1.1 **Recreational Scooter Assistant (RSA):**

- 1.1.1. Minimum 18 years of age
- 1.1.2. Three star diver CMAS or equivalent
- 1.1.3. CMAS Recreational Scooter Diver certification
- 1.1.4. Private liability insurance,
- 1.1.5. Valid medical attest in compliance with the national CMAS federation's rules
- 1.1.6. Must have at least 100 logged open water dives in comparable environment where course takes place
- 1.1.7. Must have at least 25 logged scooter dives in comparable environment where course takes place
- 1.1.8. Have been working as an assistant candidate during at least 1 entire recreational scooter diver course under the direction of an RSI (or above) and to his/her full satisfaction and received a recommendation

### 1.2 **Tec Scooter Assistant (TSA):**

- 1.2.1. Minimum 18 years of age
- 1.2.2. Three star diver CMAS or equivalent
- 1.2.3. CMAS Advanced Nitrox Diver or equivalent
- 1.2.4. CMAS Tec Scooter Diver certification
- 1.2.5. Private liability insurance,
- 1.2.6. Valid medical attest in compliance with the national CMAS federation's rules
- 1.2.7. Must have at least 100 logged open water dives in comparable environment where course takes place
- 1.2.8. Must have at least 25 logged scooter dives in comparable environment where course takes place
- 1.2.9. Have been working as an assistant during at least 1 entire recreational scooter diver course under the direction of an RSI (or above) and to his/her full satisfaction and received a recommendation
- 1.2.10. Have been working as an assistant candidate during at least 1 entire Tec scooter diver course under the direction of an TSI (or above) and to his/her full satisfaction and received a recommendation

### 1.3 **Overhead Environment Scooter Assistant (OSA):**

- 1.3.1. Minimum 18 years of age
- 1.3.2. Three star diver CMAS or equivalent
- 1.3.3. CMAS Full Cave Diver (or equivalent) OR Wreck Penetration Diver (or equivalent) OR Ice Diver (or equivalent)
- 1.3.4. CMAS Overhead Environment Scooter Diver certification
- 1.3.5. Private liability insurance,
- 1.3.6. Valid medical attest in compliance with the national CMAS federation's rules
- 1.3.7. Must have at least 100 logged overhead environment dives in comparable overhead environment where course takes place
- 1.3.8. Must have at least 25 logged scooter dives in comparable overhead environment where course takes place
- 1.3.9. Must have his/her own scooter, which fulfils at least all characteristics of a class 3 rated scooter
- 1.3.10. Have been working as an assistant during at least 1 entire Tec scooter diver course under the direction of an TSI (or above) and to his/her full satisfaction and received a recommendation
- 1.3.11. Have been working as an assistant candidate during at least 1 entire overhead environment scooter diver course under the direction of an OSI and to his/her full satisfaction and received a recommendation

### 1.4 **NOTES:**

- 1.4.1. **There is no written theory exam for assistants.**
- 1.4.2. **Their practical supervising and supporting performance is evaluated during their activities as assistant candidates from the responsible course director, who - afterwards - files this report to the corresponding governing body within the national federation.**

## 2 INSTRUCTORS

### 2.1 NOTES:

- 2.1.1. On any level, a written theory exam - consisting of 30 MC questions - to evaluate the theoretical knowledge of the instructor candidate is mandatory. In order to pass, the instructor candidate has to reach a score of min. 80% correct answers.
- 2.1.2. On any level, the instructor candidate must successfully pass this theory exam BEFORE he/she is starting his/her FIRST course in own responsibility and under the supervision of a delegated instructor from the federation.
- 2.1.3. The teaching performance in classroom and open water of all instructor candidates is evaluated by the delegated supervisor/examiner from the national federation during the FIRST autonomous course the candidate holds. The supervisor/examiner has to file a complete report afterwards to the corresponding governing body within the national federation.

### 2.2 Recreational Scooter Instructor (RSI):

- 2.2.1. CMAS one star instructor or equivalent
- 2.2.2. Active teaching status of his/her national CMAS federation; this includes private liability insurance, valid Medical attest in compliance with the national CMAS federation's rules
- 2.2.3. CMAS Recreational Scooter Diver certification
- 2.2.4. CMAS Nitrox Diver or equivalent
- 2.2.5. Must have at least 200 logged open water dives in comparable environment where course takes place
- 2.2.6. Must have at least 50 logged scooter dives in comparable environment where course takes place
- 2.2.7. Have been working as an assistant during at least 2 entire recreational scooter diver courses under the direction of an RSI and to his/her full satisfaction and received a recommendation
- 2.2.8. As Recreational Scooter Instructor Candidate, have given his/her first complete and autonomous recreational scooter diver course under the supervision of a delegated supervisor from the national federation and have received a positive overall evaluation/grading
- 2.2.9. Must have his/her own scooter, which fulfils at least all characteristics of a class 1 rated scooter

### 2.3 Tec Scooter Instructor (TSI):

- 2.3.1. CMAS one star instructor or equivalent
- 2.3.2. Active teaching status of his/her national CMAS federation; this includes private liability insurance, valid medical attest in compliance with the national CMAS federation's rules
- 2.3.3. CMAS Recreational Scooter Diver certification
- 2.3.4. CMAS Advanced Nitrox Diver or equivalent
- 2.3.5. Must have at least 200 logged open water dives in comparable environment where course takes place
- 2.3.6. Must have at least 50 logged scooter dives in comparable environment where course takes place
- 2.3.7. Have been working as an assistant during at least 1 entire Tec scooter diver course under the direction of a TSI and to his/her full satisfaction and received a recommendation
- 2.3.8. As Tec Scooter Instructor Candidate, have given his/her first complete and autonomous Tec scooter diver course under the supervision of a delegated supervisor from the national federation and have received a positive overall evaluation/grading
- 2.3.9. Must have his/her own scooter, which fulfils at least all characteristics of a class 2 rated scooter

### 2.4 Overhead Environment Scooter Instructor (OSI):

- 2.4.1. CMAS Full Cave Diving Instructor or equivalent
- 2.4.2. Active teaching status of his/her national CMAS federation; this includes private liability insurance, valid medical attest in compliance with the national CMAS federation's rules
- 2.4.3. CMAS Overhead Environment Scooter Diver certification
- 2.4.4. CMAS Advanced Nitrox Diver or equivalent
- 2.4.5. Must have at least 200 logged overhead environment dives in comparable overhead environment where course takes place
- 2.4.6. Must have at least 50 logged scooter dives in comparable overhead environment where course takes place
- 2.4.7. Have been working as an assistant during at least 2 entire overhead environment scooter diver courses under the direction of an OSI and to his/her full satisfaction and received a recommendation

- 2.4.8. As Overhead Environment Scooter Instructor Candidate, have given his/her first complete and autonomous overhead environment scooter diver under the supervision of a delegated supervisor from the national federation and have received a positive overall evaluation/grading
- 2.4.9. Must have his/her own scooter, which fulfils at least all characteristics of a class 3 rated scooter

### III

## Technical classification of scooters

(For more details. ref. to the document “CMAS CONSTRUCTION STANDARDS FOR UNDERWATER SCOOTERS” )

#### 1 Class 1 (Recreational)

Class 1 identifies all scooters with technical specifications that only meet recreational dive specifications with a single tank and within the limits of 2star CMAS or AOWD PADI (or comparable levels of other organisations).

Class 1 (or higher class) scooters are suitable for the CMAS Recreational Scooter Diver certification courses.

#### 2 Class 2 (Tec)

Class 2 identifies all scooters with technical specifications that meet class 1 dive specifications and technical diving specifications in non-overhead environments, and within the limits of a 3star CMAS diver in combination with technical diving certifications, such as Nitrox and Trimix (or comparable levels of other organisations).

Class 2 (or higher class) scooters are to be used for the CMAS Tec Scooter Diver certification courses.

#### 3 Class 3 (Overhead environment)

Class 3 identifies all scooters with technical specifications that meet the previous two classes and are suited for all types of technical dives in natural or artificial overhead environments, such as cavern, caves, wrecks, mines, submerged buildings, under ice.

Class 3 scooters are mandatory for the CMAS Overhead Environment Scooter Diver certification courses.